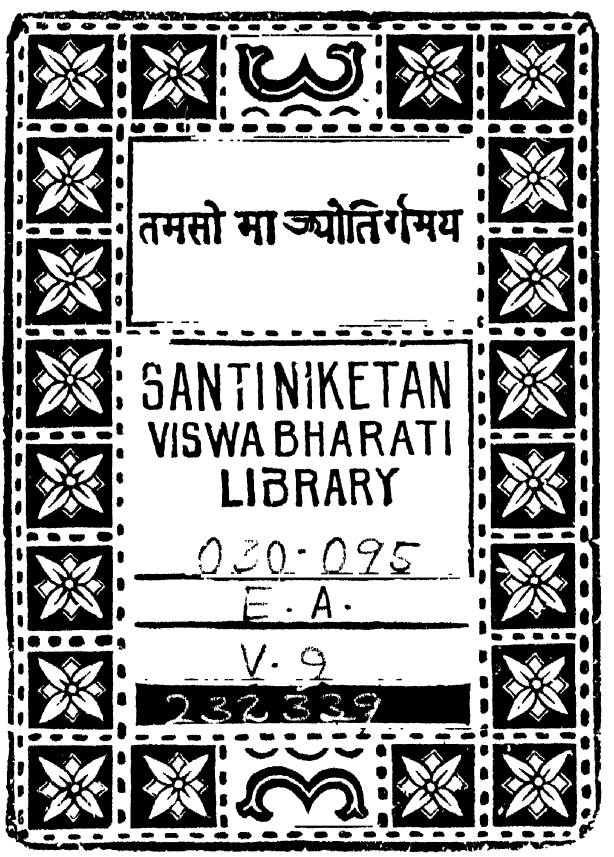
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ENCYCLOPAEDIA ASIATICA

ENCYCLOPAEDIA ASIATICA

Comprising

INDIAN SUBCONTINENT
EASTERN AND SOUTHERN ASIA

Commercial, Industrial and Scientific

By

EDWARD BALFOUR

IN NINE VOLUMES

VOL. IX. TANGAL-ZYMOOSHT

COSMO PUBLICATIONS
NEW DELHI INDIA

COSMO PUBLICATIONS

24-B, ANSARI ROAD, NEW DELHI-110002.

The present work was originally published with the title "Cyclopaedia of India and of Eastern and Southern Asia" in 1858 and after an edition in 1873, was completely revised in 1884. The present edition which is released with the title 'Encyclopaedia Asiatica,' is a reprint of that revised edition and contains prefaces to First, Second & Third editions, which were not available in the last edition.

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PREFACE TO THE FIRST EDITION

Whilst we find books of reference in most departments of sciences and literature in connection with European countries, daily becoming cheaper and more abundant, those who investigate and seek for information regarding the sources of British India, or any of the Scientific and economic subjects connected with Eastern Countries, still meet with much difficulty and hindrance, owing to the necessity of consulting numerous authors whose works are scarce or costly. And as some inquirers are without the pecuniary means of procuring all the requisite books and Journals, or find it impossible to procure them at any cost, whilst others want leisure or opportunity for such extensive research, it is evident that progress in these branches of knowledge would be greatly facilitated, by collecting and condensing this widely dispersed information, thereby enabling future inquirers to gain some acquaintance with the results of the investigations made by the many diligent and laborious individuals, who have devoted a great portion of their time to collecting information over the vast areas of Southern Asia.

My avocations while employed in India, more particularly in the past seven years, have rendered necessary for me a collection of books of reference relating to India and the East, somewhat more numerous and varied in character than private individuals generally possess ; whilst my employment a Secretary to the Madras Central Committees for the Great Exhibition of 1851, the Madras Exhibition of 1855, the Universal Exhibition held in 1855, in Paris, and the Madras Exhibition of 1857, combined with my duties (since 1851), as Officer in Charge of the Government Central Museums, have brought under my notice a rare variety of Eastern products and subjects of interest; and thinking that, before quitting the countries in which I have dwelt for nearly a quarter of a century, I might, with advantage leave to my successors in a portable form, the notes made on the products of the East that have come under my notice, combined with an abstract of useful information respecting these contained in my books, I have been led to show the results in the present shape.

A work of this aim and character might doubtless fully occupy the life time of several men attainments ; and this Cyclopedia of India and Eastern and Southern Asia, may therefore be regarded only as a first attempt towards the kind of book, the want of which has been long and generally felt. But although fully conscience of its incompleteness in many respects, yet, I trust it may still

be received with all imperfections and omissions, as a useful and opportune addition to Asiatic literature ; at least by those who recognize the greatness of the saying of Emmerson, that "the thing done avails, and not what is said about it; and that an "original sentence, or a step forward, is worth more than all the censors"* which may be made by such as are disposed to find fault, or who would demand in a work of this kind, a degree of perfection unattainable on a first trial.

The book is merely a novelty in form, the matter it contains being as old as our possessions in India : it is simply a compilation of the facts and scientific knowledge, which authors and inquirers have been amassing and communicating since then, to one and another and the public. But, "in our time, the higher walks of literature have been so long and so often trodden, that whatever any individual may undertake, it is scarcely possible to keep out of the foot steps of his precursors",† and this Cyclopedia. I may, therefore, avow to be put an endeavour to make generally available, in a condensed form, the information acquired by those who have in any way investigated the natural or manufactured products of Southern Asia, or have at any time made its arts or natural history the subjects of inquiry. Some of those whose writings I have made use of, have long since gone to their account, but many a labourer yet alive may find the result of his labours embodied here ; and I have done this freely, because even those whose writings I have most largely drawn, will acknowledge that the quaint old lines of Chaucer†† still apply with full force; viz. that,

"Out of the old field, as man sayeth,
Cometh all his new corn fro' year to years;
So out of old books, in good faith,
Cometh all this new Sciences that men lere"

Indeed, I have rather sought to collect and condense accurate and well ascertained facts than to present novelties; for originality is but too often unconscious or undetected limitation. Byron, years ago, remarked that all pretensions to it are ridiculous; and a wiser one than Byron has told us that "there is nothing new under the sun." But if there be nothing absolutely new in this work, I hope it may yet be found to contain much which to many was unknown before; and which for want of books, liesure, or opportunity, may have debarred them from learning.

The Cyclopedia is not intended to comprise the whole Science of Botany, nor that of Medicine or Zoology; nor to instrust in all the matters useful in Commerce or the Arts; but, whether examined for information or ammusement, the botanist, the medical practitioner, the naturalist and the merchant,

*English Traits p. 5
†Salad for the Social, p. 317
††Ibid, page 321.

may perhaps each find something in it which, from his engagements he did not know before, or though once knowing he may have again forgotten. In both cases, the work may prove useful, since old thoughts are often like old cloths; put away for a time, they become apparently new by brushing up. It would have been better perhaps, had a work of this kind been undertaken years ago, or even now were it made the joint effort of several persons : indeed, to render it in any way complete, would call for the resources at the command of a Government rather than of individuals; but we cannot have every thing at the time we wish, nor in the way we wish, and it is better to have some one undertake it and do it the best way he can, now, than to postpone it to some further indefinite period.

With a view therefore of laying a foundation as a starting point for future inquirers, I now undertake the commencement of a work, towards which I hope to receive from many quarters aid and support as I proceed : being thereby enabled either to produce future enlarged and improved editions of the work my self, placing it, as I hope, within the reach of all, or seeing that task taken up here after, by younger men, with more time and opportunities then are now before me. A dinner of fragments is often said to be best dinner, and in the same way, there are few minds that might furnish some instructions and entertainment, from their scraps, odds and ends of knowledge. Those who cannot weave a uniform web, may atleast produce a piece patchwork; and any items of information sent to me will be very acceptable.

There is another difficulty which inquirers in this country have had to meet and struggle with ; I allude to the many languages and dialects in use in India and Eastern Asia, and subsequently the variety of scientific, national, or even local names, by which the same thing is known. The only means of overcoming this difficulty was to frame a copious index of Contents; for Pope has well said that,

"Index learning turns no student pale,
yet holds the eel of science by the tail."

This Indexing will add to the bulk of the book, but greatly also to its value as a work of reference; and will be carefully completed.

1858 Edward Balfour

PREFACE TO THE SECOND EDITION

The first edition with its two Supplements contained 29,870 names and the work was favourably received by the public and press. But my acquintance with these countries did not permit me to regard that number as other than a foundation for an enlarged and improved edition, and this second edition will contain about 100,000 names, under which much connected with India and with Eastern and Southern Asia will be found.

I have spared neither time nor labour to make the present edition as perfect as possible, but a Cyclopedia must necessarily ever be progressive.

1871 Edward Balfour

PREFACE TO THE THIRD EDITION

THE first edition of this Cyclopædia was published in 1858 in India, the second, also in India, in 1873, and the years 1877 to 1884 inclusive have been occupied in revising it for publication in England. During this process, every likely source of further information has been examined, and many references made. I am under obligations to many learned men, to the Secretariat Officers of the Indian Governments, and to the Record and Library Officers of the India Office, Colonial Office, and British Museum, for their ready response to my applications for aid.

This edition contains 35,000 articles, and 16,000 index headings, relating to an area of 30,360,571 square kilometers (11,722,708 square miles), peopled by 704,401,171 souls. In dealing with subjects in quantities of such magnitude, oversights and points needing correction cannot but have occurred; but it is believed that errata are not many, and will be of a kind that can be readily remedied.

It is inevitable that difficulties in transliteration should be experienced, owing to the variously accented forms which some words assume even among tribes of the same race, also to the different values accepted in many languages for the same letters, and especially to the want of correspondence in the letters of the several Eastern alphabets; but in this work traditional and historical spelling has not been deviated from, and the copious Indices will guide to words of less settled orthography.

Men of the same race, habits, and customs, plants and animals of the same natural families, genera, and even species, are so widely distributed throughout the South and East of Asia, that local histories of them are fragmentary and incomplete. India in its ethnology, its flora and fauna, can therefore only be fairly dealt with by embracing a wider area. This is the reason why the Cyclopædia and my work on the Timber Trees include all Eastern and Southern Asia, the regions, the areas and populations of which may be thus indicated: —

INDIA, EASTERN AND SOUTHERN ASIA.	SQUARE KILOMETERS.	POPULATION.
Caucasus, Russian,	472,666	5,546,554
Trans-Caspian, do.	327,068	203,000
Central Asia, do.	3,017,700	5,036,000
Independent Turkoman Region,	206,500	450,000
Khiva,	57,800	700,000
Bokhara, Thignan, Karategin, etc.,	239,000	2,130,000
Arabia,	3,156,600	5,000,000
Persia,	1,647,070	7,653,000
Afghanistan and Provinces,	721,664	4,000,000
Kafiristan,	51,687	500,000
China Proper,	4,024,690	350,000,000
China Provinces,	7,531,074	21,180,000
	11,555,764	371,200,000
Corea,	236,784	8,500,000?
JAPAN AND PROVINCES,	382,447	36,357,212
British India and Feudatories,	3,774,193	252,541,210
Nepal, Bhutan,	234,000	3,300,000
French India,	508	276,649
Portuguese India,	3,355	444,987
Ceylon,	24,702	2,606,930
FURTHER INDIA—		
British Burma,	229,351	3,707,646
Manipur,	19,675	126,000
Tribes south of Assam,	65,500	200,000
Burma, Independent,	457,000	4,000,000
Siam,	726,850	5,750,000
Annam,	140,500	21,000,000
French Cochin-China,	59,456	1,597,013
Cambodia,	83,861	890,000
Malacca, Independent,	81,500	300,000
Straits Settlements,	3,742	390,000
ISLANDS—		
Andamans,	6,197	14,500
Nicobars,	1,772	5,500
Sunda Islands, Moluccas,	1,693,757	28,867,000
Philippines, Spanish Indies,	296,182	6,300,000
Netherland India,	677,038	27,154,054
New Guinea and Papuan Islands,	785,362	807,956
British Northern Borneo,	57,000	150,000
Australia,	...	2,193,200
Tasmania,	...	115,705
New Zealand,	...	489,933
Total, excluding Australia, Tasmania, and New Zealand,	30,360,571 sq.kil. 11,722,708 sq. m.	704,401,171

I am under obligations to Messrs. Morrison & Gibb for their careful press-work. All that their art could do has been done to aid me in keeping the work in a compact form.

EDWARD BALFOUR.

2 OXFORD SQUARE, HYDE PARK,
LONDON, 24*th May* 1885.

ENCYCLOPAEDIA ASIATICA

VOL. IX.

TANGAL-ZYMOOSHT

TANGAL. MALEAL. A priest of the Moplah Muhammadans of Malabar. They are regarded with a respect almost amounting to veneration.

TANGA MARA, a pirate race who in ancient times occupied the sea-coast from Kurachee to Lahori Bandar; one of their heroes, Rana Abaid, lived A.D. 1591.

TANGAR, a hill in the Tanna collectorate of Bombay, about 2350 feet above the sea. Its rainfall is about 80 to 83 inches. The plateau is about two miles long and one mile broad.

TAN-GAS-GUZ, the Arabic designation of the Uighur Turks who dwelt north of Tibet, their country extending from Khorasan to the China frontiers. They were Buddhists.

TANGEER, a bark of Macassar, used in making a lye for washing the hair, which it is said to cleanse and strengthen.

TANGGULUN, a hard wood of Java, of a close grain, and employed by turners for various small works.

TANGHAN, a small horse of Tibet, wonderfully strong and enduring; they are never shod, and the hoof often cracks, and they become pigeon-toed. They are frequently blind of one eye, when they are called Zemik (blind ones), but this is thought no great defect. They average £5 to £10 for a good animal in Tibet, and the best fetch £40 to £50 in the plains of India, where they become acclimated and thrive well. Giantchi (Jhansi-jeung of Turner) is the best mart for them in the eastern part of Tibet, where some breeds fetch very high prices. The Tibetans give the foals of value messes of pigs' blood and raw liver, which they devour greedily, and it is said to strengthen them wonderfully. The custom, Dr. Hooker believes, is general in Central Asia. Humboldt (Per. Nar. iv. p. 320) described the horses of Caraccas as occasionally eating salt meat. The Tanghan, Retangun, or Tanyan of Nepal, so much esteemed for their hardiness, come entirely from Upper Tibet, and are so sure-footed that the people of Nepal ride them without fear over very steep mountains and along the brink of the steepest precipice. The species which is indigenous to Bhutan has its title from the region in which they are bred, being called Tangun, vulgarly Tannian, from Tangastan, the general appellation of that assemblage of mountains which constitutes the territory of Bhutan. In the Dekhan, and throughout the S. of India generally, the small horses or ponies from Pegu and Acheen are called Tanghan by the Muhammadans.—*Turner's Embassy*, p. 22; *Hooker's Jour.; Smith's Nepal.*

TANGHIN, Cerbera tanghin, Tanghinia venenifera, *Poir.*, formerly used in Madagascar as an ordeal in cases of suspected crime or apostasy.

TANG-T'U-P'AU. CHIN. Literally artillery; a class of drugs used for the successful attacking of disease.

TANJONG. MALAY. A headland. Tanjong Batu Besayab, Tanjong Krassak, Tanjong Merrum, Tanjong Sumbuang are headlands in the Banca Islands.

Tanjong Awat, or Cape Caran, called also Mud Point, nine miles N.W. of Salangore.

Tanjong Basso, or Baccoun Island, in lat. 0° 20′ S., long. 103° 48′ E., distant 19 miles N.W. by W. from the Calantigas.

Tanjong Bato, or Point Pedro, 12 miles E.N.E. of Acheen road, terminates in a gentle slope, and is covered with large trees.

Tanjong Sampan Mangaio, the north extreme of Borneo.

TANJORE, a town which gives its name to a district in the Madras Presidency. The district has an area of 3654 square miles, and in 1881 a population of 2,130,383. It is bounded on the north by the Colerun, and it has the Bay of Bengal on the east. The delta of the Cauvery occupies the flat northern part of the district, which is highly cultivated with rice, dotted with groves of cocoanut trees. This part is thoroughly irrigated by an extensive network of channels connecting the different parts of the delta. South-west of the town of Tanjore the country is somewhat more elevated, especially about Vellum. Tanjore was conquered by Shahji, father of Sivaji, about 1659. The Mahrattas, in A.D. 1678, held Tanjore under Venkaji, brother of the Great Sivaji.

During the 18th century, the possession of this province was greatly contested. In 1762, the raja of Tanjore agreed to pay tribute to the Nawab Walajah of the Carnatic. In 1771, the Tanjore raja, Tuljaji, son of Pertab Singh, with the aid of the British, subjected the Polygar of Ramnad, but a peace being arranged unknown to the British, the raja was compelled to cede the fort of Vellum, and the districts of Koiladdi and Elangar. In 1773, the British made prisoners of the raja and his family, but he was restored, 11th April 1776, on a treaty to submit to the E. I. Company. In 1787, Tuljaji died, and was succeeded by his half-brother, Amir Singh. But Tuljaji had adopted Sarfoji, and after a time Amir Singh was set aside, and Sarfoji reinstated. Sarfoji died in 1832, and was succeeded by his only son Sivaji, on whose death in 1855, without male heirs, direct or collateral, the titular dignity became extinct. His daughter obtained a title of princess. He had three queens, Syudammal Bai Sahibah, Kamatche Bai Sahibah, and Pathuma Bai Sahibah. By the first of these he had two daughters, but, having no male issue by any of the three, he sent his prime minister to Poona for damsels from his own kindred. Seventeen were selected for the raja and his nobles, but on arrival they claimed to be the raja's brides, and threatened to destroy themselves, on which the raja married the whole of them, the British Government sanctioning Rs. 6,72,000 for the expenses. Even by these seventeen the raja had no male issue, and he took sixty-nine concubines, by whom he had thirteen daughters and nine sons. The raja died on Tuesday, October 29, 1855, in his 49th year.

Raja Sarfoji was exceedingly fond of Schwartz, helped him liberally with funds, and gave him lands at Canandagoody for a mission, and also the site on which the mission-house, church, etc., are built. He established a boarding-school for Schwartz, and gave him the cultivated lands at Sediangal, from the produce of which the boarders were supported. These lands still support the mission at Tanjore. He repaired the great temple at Tanjore, laying down stones all through the courtyard, and also performed for it the Koombabhashagam, or regilding of the Kalasam. He also repaired several other temples in and around Tanjore, all of which cost him Rs. 8,66,700.

The district from pre-historic times has been largely irrigated by means of canals and dams,

from the Cauvery and from the Colerun, but chiefly from the former, the Colerun, which forms the boundary of Tanjore, on account of its low level, being less utilized. The main branch of the Cauvery enters the Tanjore district 8 miles east of Trichinopoly, and spreads out into innumerable small channels, which form a vast network extending down to the sea, and converts the northern portion of the district into one rice-field. Near the western boundary of Tanjore, the Cauvery and Colerun approach each other, and here in some ancient time a masonry dam, called the Grand Anicut, has been constructed to prevent the waters of the Cauvery being drawn off into the Colerun, the bed of which is here 9 or 10 feet lower. It is said to have been constructed by a king of the Chola dynasty in the 3d century A.D. The works in the early part of the 19th century were improved by Captain Caldwell and Captain (Sir Arthur) Cotton of the Madras Engineers, by means of many regulating dams and calingulas or waste weirs. In the area of 900,000 acres now irrigated, the total revenue in 1875-76 was £463,350.

Upwards of 90 per cent. of the population are Hindus, 5 per cent. Muhammadans, and 3 per cent. Christians. Brahmans in 1871 numbered 126,757; the Vellalar, a great agricultural race, were 348,400; the Vanniar, labourers, 574,789; Pariahs, 306,569; Satani and Pandaran sectarians, 49,763. The Muhammadans are chiefly Labbai or Yonakar, a race of mixed descent from Arab fathers and women of the country. The largest towns in the district are Tanjore, Combaconum, Myaveram, Tranquebar, and Manaargudi. At Tanjore is a great Saiva temple, the finest of the pyramidal temples of India. In 1777, it was fortified by the French, and has not again been reconsecrated. The pyramid rises in thirteen storeys to a height of 190 feet. A figure of the bull Nandi faces the temple, and there are several smaller shrines in the enclosure. The sculptures on the gopuras relate to Vishnu, while everything in the courtyard is dedicated to Siva. It is said to have been erected in the 14th century by Kadu Vettiya, a Soran or Cholan king, and the statues of the courtyard may have been subsequent.

Romish missions date from the first half of the 17th century; and at Negapatam a French Society of Jesus, in 1846, founded the College of St. Joseph. In 1706, the German Protestant missionaries Ziegenbald and Plutschau established a Lutheran mission at Tranquebar, under the patronage of Frederic IV. of Denmark, and about the middle of the century the Reverend C. F. Schwartz established another mission; and missionaries are now proselytizing there under the Society for the Propagation of the Gospel. Tanjore is famed for its carpets, jewellery, repoussé-work, and copper wares.—*Pharoah's Directory; Imp. Gaz.; Horsburgh.*

TANK.

Tanken, . GUJ., MAHR. | Eri, ... TAM.
Talao, . . HIND., PERS. |

The tanks or artificial water reservoirs of India are the greatest of all the Hindu irrigation works. They are of two kinds,—one excavated and used for drinking water, bathing, and irrigation; the other formed by throwing a bund or dam across the mouth of a valley or across any sloping ground. The excavated tanks have stone or other steps all round down to the water, generally the whole length of each face; and in many instances temples have been erected around the edge, and little shrines down the steps. Many of the irrigation tanks are of vast extent, with magnificent embankments, in respect to their elevation and solidity. Some of them form lakes many miles in circumference, and water great tracts of country. As instances of this may be mentioned the Red Hill tank near Madras, the Vihar lakes near Bombay; and in Rajputana, the Raj-Samandar, the tank of Cumbum in the Kurnool district, of Ulsur near Bangalore, of Mir Alam near Hyderabad, and the Bhandara and Lachora reservoirs of Nimar approach the dignity of lakes. Also, a race known as the Ghorbasta, at some pre-historic time constructed cyclopean dams in the mountains of Baluchistan. The tanks of India are named according to their size. The ahar of the N.W. Provinces is a small pond; johar, a large pond; other tanks are called pokhar and talao, the last being of masonry; others are dabra, liwar, talari, and garhiya. Sagar is a lake tank of the largest size.

The existing tank irrigation in Southern India is chiefly ancient, and comprises innumerable tanks of all sizes, from what might be termed lakes downwards. These may be divided into three classes:—1. Those formed by the closing of the passage of a considerable river through a narrow gorge, in a range of hills, by means of a high dam or bund. 2. Those formed in the plains by embankments carried across the drainage of the country, and impounding the water of one or more streams; these tanks being often of great superficial area, but shallow. 3. Tanks which might be considered intermediate between the other two, having in general a greater length of dam than the first, and a greater depth of water than the second. Few examples of the first kind remain entire. The ruined Mudduk Masur tank, one of this class situated on the borders of Dharwar and Mysore, has a length of the main bund on the crest, 550 yards; present height, from 90 to 108 feet; width at the base, from 945 to 1100 feet; area of the lake at 90 feet depth, 40 square miles; contents, about 1400 million cubic yards of water. The area of the drainage basin, which was on the inner slopes of the Western Ghats, was 500 square miles. Mr. Gordon was engaged on a proposed restoration of this tank, but it was found that the present average rainfall would not suffice to fill much more than one-half of its ancient basin, and it was suggested that the depth should be reduced from 90 to 70 feet. This diminution in the supply was supposed to be attributable partly to the diminished rainfall, and partly to the construction of small tanks on some of the feeders, at a date subsequent to the completion of the great tank, which was assigned by tradition to the 14th or 15th century. The main bund was supplemented by two smaller ones, placed on saddles at some distance from it, in the range of hills; and it was by the breaching of one of these that the tank was ruined, as the principal embankment remained entire. There were no traces of a waste weir or by-wash of any kind. Of the second and third classes of tanks, some are ancient ones of great dimensions, such as the ruined Poonairy tank, in the Trichinopoly district, of which the embankment was 30 miles in length,

and the Veeranum tank, still in action, with a bund 12 miles long.—*Elph.* p. 163; *Carnegy.*

TANK, a town in the Dehra Ismail Khan district of the Panjab, formerly the capital. It is situated in lat. 32° 14′ N., and long. 70° 25′ E., and is at the foot of the Sulaiman Hills. Its chief, Sarwar Khan, devoted himself throughout a long reign to the amelioration of his territory and his tribesmen. Under his sway, the Daulat Khel changed from a pastoral to a cultivating people; and they still revere his memory, making his acts and laws the standard of excellence in government. By assiduous cultivation, it has acquired an aspect of prosperity and greenness which distinguish it strongly from the neighbouring tahsil of Kolachi.

TANKA, an ancient class of gold coins in the Peninsula of India, as the Padma Tanka. Tankam in Tamil means heavy (as gold); in Telugu, and in the Dekhani, a tanka was a sum of 16 paisa or dâb, and it gives the native name for a mint, Tangsal or Tankasala, a word said to be Sanskrit. Tanka would be any stamped coin, money in general; Tanka kasa, a gold ducat; Rama tanka, an ancient gold coin.

TANKHUL, a rude tribe near the source of the Irawadi.

TANKOEBAU PRAHOE, a volcano in Java, with a crater from which the eruptions of 1829 and 27th May 1846 issued. Dr. Horsfield visited it in 1804.

TANNING of leather is one of the manufactures where, with an unlimited supply of hides and first-rate barks, gums, and extracts, the goods turned out by natives of India are not of a superior quality. Inferiority of Indian leather may be ascribed to want of skill on the part of the currier, and the use of quicklime. This is probably owing to the very low rank of the artisans, for the art of leather production is well understood and successfully practised by the European tanners, the leathers made by them being scarcely inferior to that made in Europe. In the usual native process, the raw hides, on first being removed, are steeped in stone vats for four and five weeks in a strong pickle of salt and water; from ten to fifteen hides are placed in each vat. While steeping, a pint or quart of the milk bush, Euphorbia tirucalli, is thrown into each vat. This contains a considerable quantity of elastic gum, and is used for water-proofing leather, and rendering cords elastic. Currying the leather is the province of the wife, while manufacturing it for the market belongs to the husband. The basis of the skins of animals is composed of a substance to which the name of gelatine is given. One of the properties of this substance is, that when combined with tannin, it forms the compound of tannate of gelatine or leather material. Tannin obtained from various sources differs materially in some of its characters. The tannin of gall-nuts, which is that generally employed for chemical purposes, is sometimes called gallo-tannic acid, to distinguish it from other species. The tanning materials best known in Europe are the oak bark, Peruvian bark, and the barks of some of the acacias. The importance of oak bark has, however, been greatly diminished since the introduction of the sumachs, as Rhus cotinus, the Venus sumach, and R. coriaria, the hide or elm-leaved sumach; also of the Divi-divi, or Cæsalpinia coriaria; of Valonia, the acorn cups of Quercus Ægilops; of catechu and gambir, from the Acacia catechu and Uncaria gambir; of the Indian Myrobalans, the mimosa or wattle bark of Australia, the cork tree bark of Spain, and willow bark. Catechu has long been employed in India for tanning skins, and its tanning properties are so great that skins are tanned by it in five days. The Cæsalpinia coriaria, or Divi-divi, was introduced into India by Dr. Wallich in 1842. The produce of the kino tree (Pterocarpus marsupium), and catechu of the betel palm, are also employed. Dr. Heyne states that the morocco manufactured at Hurryhur was treated with salt and a mixture of water, and the milk of wild cotton (Calotropis gigantea).

In many parts of India the hides are so removed as to form a bag, into which the tan is placed, and the filled bag kept suspended for several weeks. Such leather is soft and flexible, and looks tolerably well, but it resists the rain indifferently, is easily penetrated by wet, and during the S.W. monsoon becomes as moist and flexible as paper dipped in water. When set aside it becomes mouldy, and very easily rots.

The following are the principal of the tanning plants of Southern and Eastern Asia:—

Acacia Arabica.
A. catechu, catechu.
A. vera, its fruit.
Albizzia, *sp.*
Alnus, *sp.*
Bauhinia variegata.
Bruguiera Rheedii.
B. eriopetala, bark.
B. parviflora, bark.
Buchanania latifolia.
Butea frondosa, kino.
Cæsalpinia coriaria.
Calotropis gigantea.
C. procera, sap.
Cathartocarpus fistula.
Carallia lucida, bark.
Careya arborea, bark.
Cassia auriculata, bark.
Conocarpus latifolia.
Diospyros glutinosa.
Eucalyptus, *sp.*
Hibiscus rosa Sinensis.
Garuga pinnata.
Glochidion, *sp.*
Hymenodictyon excelsum.
Juglans regia.
Kandelia Rheedii.
Nyctanthes arbortristis.
Pinus longifolia.
Pterocarpus marsupium.
Punica granatum, rind.
Quercus incana.
Q. infectoria, gall-nuts.
Rhizophora conjugata.
R. gymnorhiza.
R. mangle.
Rhus cotinus.
Rottlera tinctoria.
Salix, *sp.*
Shorea robusta.
Syzygium jambolanum.
Tamarix Indica, galls.
Terminalia, several species.
Uncaria gambier.
Zizyphus jujuba.

Divi-divi, catechu, tanghedu bark, etc., produce their effect rapidly, and the leather is durable.

The bark of Bauhinia variegata is made use of as a tanning substance in Sind and other parts of Asia. The bitter astringent bark and the galls of several of the tamarisk tribe are also well suited for the purpose.

The Tenasserim Provinces are rich in materials for tanning. The bark of the careya, and of half a dozen different species of mangrove, the fruit of the sea-cocoanut, and the peel of a species of ebony, all abound in tannic acid.

All attempts to hurry the leather-making process beyond a certain point, by the use of concentrated solutions of tan, etc., are for the most part failures, as the manufacture of good leather to a great extent depends on the process being conducted in a slow and gradual, but at the same time thorough and complete manner.

The currier and tanner of India is known as the Chamar, Chakili, Malla-vadu, Mang. They are held in great disesteem, and are the public executioners. The condition of the tanners is similar in Japan, where, as in India, they are restricted to a particular locality, and are similarly employed.

—*Wilson; Heyne's Tracts; Simmonds' Comml. Products; Prof. Solly in Jury Reports of Exhibition*, 1851; *Madras Exh. Jur. Reports; Stewart.*

TANPING is imported into Shanghai from the north of China in great quantity. It is a dry paste, the residuum or husk of a leguminous plant called Teuss, from which the Chinese extract oil, and which is used, after being pressed, as manure for the ground.—*Simmonds.*

TANSALA, a smoky quartz stone, like the smoky topaz or cairngorm stone.

TANSEIN, a mountai in Nepal rising 6000 feet above the sea.

TANSEN, a celebrated musician and composer who went to Gwalior in the beginning of the 16th century, and is buried there. He was a native of Patna, who had a great natural fondness for music, and had been attracted to Brindaban by the fame of Hari Das. The emperor's persuasions and promises prevailed upon Tansen, and he followed in the train of Akbar, to flourish in life, and acquire the celebrity of an incomparable musician in the annals of his nation. From a Hindu he became a convert to the Muhammadan faith, and his remains lie buried at Gwalior, where the tomb is overshadowed by a tree, concerning which a superstitious notion prevails, that the chewing of its leaves will give an extraordinary melody to the voice. Dr. Hunter, writing in 1790, mentioned this, and 30 years later Lloyd found that it was still 'religiously believed by the dancing girls.' So strong was this belief, that the original tree died from the continual stripping of its leaves, and the present tree is only a seedling of the melody-bestowing tamarind.—*General Cunningham*; *Tr. of Hind.* ii, p. 69.

TAN TAE HOEY, a political union amongst the Chinese of Singapore. A description given of the initiation into this combination is as follows:—About seven o'clock they had all arrived, and commenced to eat and drink spirits. In an hour this finished, when they commenced to play on drums, etc. On this they all arranged themselves in order, sitting opposite the Datu (idol), but I observed that their faces were as red as the Bunga Rayah from drunkenness. Among them all there was one chief, who sat on a lofty chair, with two men standing at his right and two at his left. After them came eight men, with drawn swords, who arranged themselves at the right and left; then came one man who burned paper in front of the idol (sacrifice); after him came eight men with drawn swords, who guarded a man with dishevelled hair, and without any upper garment,—in fact, he had only a pair of trousers. This man came in front of the chief, and bowed down till his head touched the ground; the armed men on the right and left now advanced, shouting, and laid their swords on his neck; they remained silently in this position for a short time, when a man advanced to the candidate's side. The chief then spoke as follows in the Chinese language:—'Who are you, and from whence came you? Who are your father and mother? Are they still alive, or are they dead?' These questions were explained to the candidate by the man who stood at his side, and were answered as follows:—'I am such a one, of such a country, and my father and mother are both dead.' Even if his father and mother were alive, he would be obliged to say they were dead, because no one whose father and mother are alive can be admitted into the society, as the existence of all those is as if they were dead to the world and its ties. The chief then said, 'Will you swear that your father and mother are dead?' he answered, 'I will,' and performed the oath by burning paper in front of the idol, saying at the same time, 'My father and mother are dead.' The chief then said, 'What have you come here for?' answer, 'I wish to join the Tan Tae Hoey.' These words mean the sky, the earth, and man. The chief then said, 'You are deceiving, your thoughts are not as your speech;' answer, 'I will swear that I am in good faith.' 'Then swear.' The candidate then, taking paper, burned it while he repeated his assertion. The chief then said, 'Are you acquainted with the rules of the society?' answer, 'Yes, I understand that I am required to take an oath by drinking blood.' The chief then said something, to which the following answer was made—'I promise not to divulge the secrets of the society to any one under penalty of death.' The chief said, 'Truly?' answer, 'Truly.' A vessel was then brought containing arrack and a little blood from each of the members of the society, and, with a knife, was placed in front of the idol. The candidate then, taking up the knife, made a slight cut in his finger, from which he allowed some blood to fall into the cup. The chief then said, 'Drink in presence of Datu Peking.' The candidate then drank a small cupful, of which the chief and all the confederates drank a little each in his turn. The chief then said, 'To-morrow go to our secretary, and ask him for a book; in that book you will find all our rules and secret signs; you will pay one dollar for it.' The chief then rose, and himself raised the candidate from his prostrate position; and now, being initiated, he can take his place among those who before would have considered him an enemy.—*Statement of Abdullah-bin-Abul Kadir Moonshee.*

TANTI. MAHR. A weaver race in Central India and Hindustan, many of whom are prosperous cultivators. Amongst the Ho of Singbhum, Tanti weavers, a helot race of apparently Hindu origin, are domesticated as essential constituents of every Ho village community. There are, besides, thousands of weavers in the Pan or Panwa, Ganda, Chik of the Southern Tributary Estates, and the Pab and Panika of the western districts. In feature these people are Aryan or Hindu, rather than Kolarian or Dravidian. They worship the Hindu gods, but are not restricted as to food articles. Their numbers in Chutia Nagpûr are about 50,000.—*Campbell; Dalton, Eth. Beng.*

TANTIA TOPI, an active, intelligent leader in the Mutiny of 1857. His force was overtaken, and its leader captured and hanged.

TANTRA. HIND. A set of works of the Hindus, in use as religious books in inculcating mystical and impure rites in honour of different forms of the god Siva and goddess Durga. The principal of the Tantra books are the Syama Rahasya, Rudra Yamala, Mantra Mahodadhi, Sareda Tileka, and Kalika Tantra. These are in the form of a dialogue between Siva and his bride Parvati, in one of her many forms, but principally in those of Uma and Parvati, in which the goddess questions the god as to the mode of performing various ceremonies, and the prayers and incantations to be used in them. The observances they prescribe have, in Bengal, almost superseded the original

ritual of the Vedas. The followers of the Tantras profess to consider them as a fifth Veda, and attribute to them equal antiquity and superior authority. It may be inferred that the system originated at some period in the early centuries of Christianity, being founded on the previous worship of the female principle, and the practices of the Yoga with the Mantra or mystical formulæ of the Vedas. Tradition is silent as to the authors of the Tantra; they are mythologically ascribed to Siva, but they are not included in any of the ordinary enumerations of Hindu literature, and were no doubt composed after that literature was complete in all its parts. They are specified in some of the Puranas, to which they must be anterior. They have been but little examined by European scholars, but sufficient has been ascertained to warrant the accusation that they are authorities for all that is most abominable in the present state of the Hindu religion.

The great feature of the religion taught by the Tantras is the worship of Sakti,—divine power personified as a woman, and individualized, not only in the goddesses of mythology, but in every woman; to whom, therefore, in her own person, religious worship may be and occasionally is addressed. The chief objects of adoration, however, are the manifold forms of the bride of Siva, Parvati, Uma, Durga, Kali, Syama, Vindhyavasini, Jaganmata, and others. Besides the usual practices of offerings, oblations, hymns, invocations, the ritual comprises many mystical ceremonies and accompaniments, gesticulations, and diagrams, and the use in the commencement and close of the prayers of various monosyllabic ejaculations of imagined mysterious import. Even in its least exceptionable division, it comprehends the performance of magical ceremonies and rites, intended to obtain superhuman powers, and a command over the spirits of heaven, earth, and hell. The popular division is, however, called by the Hindus themselves the left-hand Sakta faith. It is to this that the bloody sacrifices offered to Kali must be imputed, and that all the barbarities and indecencies perpetrated at the Durga Puja, the annual worship of Durga, and the Charakh Puja, the swinging festival, are to be ascribed. There are other atrocities which do not meet the public eye. This is not an unfounded accusation, not a controversial calumny. Some of the books are in print, veiled necessarily in the obscurity of the original language, but incontrovertible witnesses of the veracity of the charges. Of course no respectable Hindu will admit that he is vamachari, a follower of the left-hand ritual, or that he is a member of a society in which meat is eaten, wine is drunk, and abominations not named are practised. The imputation will be indignantly denied. If the Tantra be believed, 'many a man who calls himself a Saiva or a Vaishnava is secretly a Sakta, and a brother of the left-hand fraternity.' No Hindu of reason and right feeling can say anything vindicative of a system which has suffered such enormities to be grafted upon it. No explanation could afford any plea, any suggestion, any opening for abuses of which he admits, when he dares to avow them in his own case, the shame and the sin.—*Wilson's Religious Practices and Opinions of the Hindus*, 33.

TANTUR. Arab. A bonnet worn by Druse ladies. It is a conical tube, about 18 inches long, of silver or copper plated, with patterns graved on it. It is fixed upon a cushion fastened to the top of the forehead, and inclines slightly forward. Over this is thrown a piece of white muslin, which falls down to the hips, and is used as a veil when they go abroad.

TANZIMAT, a reformed system introduced into most provinces of Turkey. Qu. Tazimat.

TAOU or Tao, doctrine of reason, a school of philosophy originated by Lao-tsze, also called Lao-Kiu, a contemporary of Confucius, born B.C. 604, died B.C. 520, at the age of 84. It was a belief in one universal spirit called Tau. Taouism in China is a recognised State religion, but it is corrupted, and Taouist priests claim to be able to expel ghosts from a house, expel noxious spirits from the sick, drive away spirits from the route of a funeral, expel spirits from a house in which a suicide has taken place, drive away spirits from the site on which a house is to be erected, and expel spirits from the pig-styes.

TAOU-TAI, a Chinese magistrate. Marco Polo, a traveller in Mid Asia and in the south and east of Asia during the 13th century, was at one time Taou-tai of a Chinese town, corresponding to the English mayor; but he is also a kind of lord-lieutenant of the county, and has judicial authority in his district, being, in short, a very powerful and responsible official.—*Frere, Antipodes*, p. 276.

TAPA. Turk. A mound, a tumulus; the tepe, tope, or st'hupa.

TAPA, a cloth made at Tahiti from the liber or inner bark of the paper mulberry, Broussonetia papyrifera. When well prepared, it is tough and flexible.—*Bennett*, i. p. 114.

TAPAN, a river on the N.E. of Mandalay, on the bank of which the town of Bhamo is built.

TAPAS, in Hinduism, penance. Tapas and Dhyan, in Buddhism, is abstinence and abstraction. The Tapas of the Buddhists was not penance or self-inflicted bodily pain like that of the Brahmans, but a perfect rejection of all outward things (pravrittika).—*Cunningham's Bhilsa Topes.*

TAPASI or Tapsi. Sansk., Tam. People who have renounced the world. If Brahmans, they are burned with clothing; if Sudras, sometimes seated on chairs and with limes in their mouths.

TAPASI MATCHI. Beng. Mango fish, Polynemus risua, *Buch.*, literally penance fish, being so called from the long streamers from its head, deemed by the Hindus to resemble the uncut hair of penitents and ascetics.

TAPHOZOUS, a genus of mammals of the subfamily Taphozoinæ, family Noctilionidæ. These bats inhabit the warmer regions of the old world and Australia. T. bicolor is said to be from the East Indies.

Taphozous longimanus, *Hardw.*

T. brevimanus.	T. fulvidus, *Blyth.*
T. Cantori.	Long-armed bat.

Found throughout India, and common in large towns, frequenting dark outhouses.

Taphozous melanopogon, *Temm.*, the black-bearded bat, occurs in Canara, and is common in Malayana. It is about 3¼ inches long, and in colour is brownish, mouse-grey above, light beneath.

Taphozous saccolaimus, *Temm.*

T. crassus, *Blyth.*	T. pulcher, *Elliot.*

The white-bellied bat, inhabits Madras, Burma, and Malay Peninsula.

TAPIOCA is obtained from the roots of two plants, Manihot aipi, *Pohl.*, the sweet cassava, and M. utilissima, *Pohl.*, the bitter cassava or tapioca plant. From the facility with which the bitter cassava can be rasped into flour, it is cultivated almost to the exclusion of the sweet variety, which contains in its centre a tough fibrous ligneous cord, which is absent in the bitter variety. The latter, however, contains a highly acrid and poisonous juice, which is got rid of by heat or by fermentation, so that the cassava bread is quite free from it. When the juice has been carefully expressed, the fecula or flour is washed and dried in the air without heat, and forms the Brazilian arrowroot of commerce; but when dried on hot plates, it becomes granular and forms tapioca. The plant is not dependent on the rainfall for its growth. About 2000 square miles of land in central Travancore are planted with it. The hill-sides are filled with the plant; and its adaptability to any soil, and its entire independence of the seasons and the water supply, induce the agricultural population to use it as an article of diet. With planting all the work of the planter ceases, except watching the plantations against robbers and wild beasts. Almost any soil, except arid sand, is congenial to the manioc plant. The ground is ploughed or dug up after a rain, and at once planted. Heaps of dried vegetation are sometimes burned, and the ashes turned with the soil before planting. The stems of full-grown plants are cut into pieces of about a foot in length, and laid horizontally in little pits dug in rows, each pit or cavity holding two sticks, one crossing the other. They are then covered with piles of dry leaves of trees, and over them small flat mounds of earth are thrown. The plants stand very close to one another, so much so that two plants per square yard is but a low average. They germinate in about a week, and it is essential that there should be one or two good showers of rain within a month after planting. An artificial tapioca is made with gum and potato starch. The granules of this are larger, whiter, and more brittle, and more soluble in cold water than genuine tapioca.—*Tomlinson; J. P. Langlois; Journ. Agri-Hort. Socy.* xii. p. 175.

TAPIRUS MALAYANUS. *Raffles.*

Tapirus Indicus, *F. Cuv.*	Asiatic tapir; Malayan do.
Babi-alu, . . BENCOOLEN.	Kuda-ayer, . . MALAY.
Le maiba, ... FR.	Saladang, . . SUMATRA.
Tennu, . . . MALACCA.	Gindol, . . ,,

The tapir is found in the Malay Peninsula, and in Sumatra and other islands of the Eastern Archipelago. It exceeds the American tapir in size. Of all living animals the tapir comes nearest to the extinct Palæotherium.

TAPIS, of Manilla, a thickly-woven silk scarf, six vara long, with oblique white stripes on a dark-brown ground. It is worn above the sarong.

TAPPA. GUJ., TAM., TEL. A stage of a journey; the post, the tapal, post-office; also a shaping block; also a piece of metal with a die or mould for producing a metal pattern in relief by hammering in soft metal.

TAPROBANE, an ancient name of Ceylon,—that used by Milton, who tells of people

> 'From India and the golden Chersonese,
> And utmost Indian isle Taprobane,
> Dusk faces with white silken turbands wreathed.'

The 6th chapter of the Mahawanso relates the arrival of Wijayo with 700 followers, and says they were tired, and supported themselves on the palms of their hands, from which the place was called Tambapanni or copper-palmed. See Tamraparni.

TAPTA-KUND. The town and temple of Bhadri-nath are situate on the west bank of the Alaknunda river, in the centre of a valley of about four miles long, and one mile in its greatest breadth. The east bank rises considerably higher than the west bank, and is on a level with the top of the temple. About the middle of the bank is a large cistern about 20 or 30 feet square, covered with a sloping roof of deal planks supported on wooden posts. This is called Tapta-kund, and is a warm bath, supplied by a spring of hot water issuing from the mountain by a subterraneous passage, and conducted to the cistern through a small spout representing a dragon's or a griffin's head. A little to the left of it is Surya-kund, another hot spring, running in a very small stream through a fissure in the bank. There is no basin or reservoir to receive the water. The principal idol, Bhadri-nath, is placed opposite the door at the farther extremity. Above his head is a small looking-glass, which reflects the objects from the outside; in front of him are two or three lamps (which give all the light the apartment receives, excepting from the door), diffusing such feeble glimmering rays that nothing is clearly distinguished. The idol is dressed in a suit of gold and silver brocade. Below him is a table, or board, covered with the same kind of cloth, which, glittering through the gloom, might impress the beholder with the idea of splendour and magnificence.—*Fraser's Himalaya Mountains*, p. 383.

TAPTA-MASHA or Tapta-Mukti. HIND. An ordeal to which Hindus suspected of wrong-doing are subjected. It consists of taking a masha weight of gold out of a jar of hot oil or butter or ghi. In 1807, this was tried before 7000 spectators on a young woman accused by her husband of adultery.—*Tr. of Hind.* i. p. 46.

TAPTI, a river of the western side of the Peninsula of India, which rises in the Betul district of the Central Provinces, in lat. 21° 48′ N., and long. 78° 15′ E., and after a course, including windings, of 450 miles, and draining an area of 30,000 square miles, it disembogues into the Gulf of Cambay. After leaving Multai, it cuts its way between two spurs of the Satpura mountains, the Chikalda Hills of Berar on the left and the range of Kalibhit on the right. Farther west, it passes through Kandesh, receiving the tributaries Purna, Waghar, Girna, Beri, Panjhra, and Siva. It narrows at the Harn phal or Deer's Leap, and then descends to the plain of Gujerat, and, on leaving the Dang forests, for 70 miles it passes near the Rajpipla Hills and across the Surat plain to the sea, being for 30 miles a tidal river. Tapti light-house, at the mouth of the river, opposite the island of Dumas, is on the mainland, near Vaux's tomb. It can scarcely be deemed a navigable stream, as at Surat, 17 miles from its mouth, it is fordable when the tide is out. The mouth is obstructed by numerous sands and a bar. The Ajunta caves—the most complete series of Buddhist caves in India without any mixture of Brahmanism—contain types of all the rest; they are in a ravine or narrow valley in the ghat south of the Tapti. At Baug, in a ravine or small

valley in the ghat on the north side of the valley of the Tapti, are three ancient Buddhist caves. On its banks are 108 spots, or tirthas, of special sanctity. At Bedhan, about 15 miles east of Surat, a religious gathering is held once in every 12 years. Ashvani Kuma and Gupteswar, about two miles up the river from Surat, are also held in esteem. Gupteswar is also a favourite place for burning the dead.—*Imp. Gaz.*

TAQDIR. ARAB. In Muhammadan belief, the absolute decree and predestination of both good and evil, recorded in the preserved tablet. Fate is believed in by all, and is accepted as a consolation in every trial, and as an excuse or palliation for every crime. See Fate; Kaza; Kismat.

TAR. HIND. The palmyra tree, Borassus flabelliformis. Tari, palm wine, toddy, from the palmyra tree. Tadmor, the city of the palmyra tree, is Palmyra. The Corypha taliera palm is also called tar, tara, tal, or tala.

TAR, Pix liquida.

Heh tuh-nau, . .	CHIN.	Smola gesta, . . .	POL.
Tuh-nau-hiang, .	,,	Degot, Smola, . .	RUS.
Goudron, ...	FR.	Shitkaja, ...	,,
Theer, ...	GER.	Tjara, ...	SW.
Catrame, ...	IT.		

Tar is obtained by burning pine and fir trees in a close smothering heap, with a channel through which the tar exudes. It is largely made in Russia, the United States, and Sweden. In Sweden and Russia from the Scotch fir (Pinus sylvestris, *L.*), by a process of dry distillation. Billets and roots of the pine being burned in a closed pit, the tar exudes, flowing into barrels, which are bunged for exportation as soon as filled. In the Himalaya, the deodar (Cedrus deodara) and the Pinus longifolia are thus utilized. Applied to wood, rope, iron, it is extensively used for resisting moisture, and is consequently in great request as a marine store. Tar water was long a celebrated remedy in the treatment of some chronic diseases of the lungs.—*Faulkner; O'Sh.; M'C. Dic.*

TARA, in Buddhism, the volumes of the sacred law. The two tables of Moses are, in Hebrew, Torah.

TARA BAI, daughter of Rao Surtan, a Solanki Rajput chief of Bednore in Rajputana. Rao Surtan was the lineal descendant of the Balhara kings of Anhilwara. Thence expelled by the arms of Ala-ud-Din, in the 13th century they migrated to Central India, and obtained possession of Tonk Thoda and its lands on the Bunas, which from remote times had been occupied (perhaps founded) by the Taks, and hence bore the name of Taksilla-naggar, familiarly Takitpur and Thoda. Surtan had been deprived of Thoda by Lilla the Afghan, and now occupied Bednore, at the foot of the Aravalli, within the bounds of Mewar. Stimulated by the reverses of her family and its ancient glory, Tara Bai learned military exercises, and joined in an unsuccessful attempt to wrest Thoda from the Afghans. Jai Mul, the third son of Rana Rai Mul, a Sesodia Rajput, proposed for her in person, and Tara Bai promised to be his if he redeemed Thoda, but before accomplishing this he rudely attempted access to her, and was slain by her indignant father. His brother Prithi-raj accepted the gage, and, relying on his honour, she accepted him in anticipation. She accompanied her husband in an attack on the Muhammadans when celebrating the Maharram; the lance of Prithi-raj and arrow of Tara Bai slew the Muhammadan chief, and their followers, rushing on, regained Thoda. Prithi-raj had been engaged in the war from the age of 14 to 23, when he was poisoned in revenge of an insult by his brother-in-law. He died at Komulver; and Tara, too late to see him in life, burned herself with his remains. Their ashes are in a lonely gorge opposite the temple of Mama Devi, where the road leads to Marwar.—*Tod's Rajasthan*, i. p. 673. See Tak.

TARA BAI, born 1627, was the widow of Raja Ram, son of Sivaji. After the death of her son, Sivaji II., she for many years exercised the authority of a sovereign, and carried on the war against Aurangzeb with great ability till that emperor's death. When Saho was released by Bahadur Shah, Tara Bai resisted his assumption of authority, and for five years carried on a civil war, till the death of her son, a person of weak intellect. Tara Bai was then set aside, and Sumbaji, younger son of Raja Ram, placed in power, only to be set aside by Saho, who assumed the sovereignty at Satara. The chief supporter of Saho was Balaji Wiswanath, a Konkani Brahman. Throughout nearly all the lifetime of Raja Saho she continued to maintain the claims of her son, Sivaji II., in opposition to Saho; and as Saho was without issue, and in his old age became imbecile, she entered into a plot with the Peshwa Balaji Rao, to make known to Saho that a posthumous son of Sivaji II. had been concealed by Tara Bai, and was still alive. At the moment of the death of Saho, the peshwa proclaimed the grandson of Tara Bai by the title of Ram Raja (A.D. 1750), and Damaji Gaekwar and Ragoji Bhonsla acknowledged the succession. But on Balaji entering on a campaign in the Nizam's territory, Tara Bai and Damaji Gaekwar intrigued against him. Tara Bai, unable to induce Ram Raja to assert his sovereignty, seized his person, and confined him in a dungeon, and proclaimed him an impostor. Balaji returned to his capital and put Tara Bai aside.

TARA DEVI, a mountain near Simla, composed of coralline magnesian limestone of fantastic shape, overhanging the road, and full of fissures and caverns.

TARAGARH, a hill fortress in the Ajmir Mairwara district of Rajputana, in lat. 26° 26′ 20″ N., long. 74° 40′ 14″ E. It is a health resort for the European troops of Nasirabad, perched on a crest of a height overhanging the city of Ajmir, and surrounded by inaccessible precipices. It was a stronghold of all the former rulers. On its summit is the shrine of Syud Husain, who was killed, A.D. 1210, in a night attack by the Rahtor and Chauhan.—*Imp. Gaz.*

TARAI, a British district in the Rohilkhand division of the N.W. Provinces, lying between lat. 28° 50′ 30″ and 29° 22 30″ N., and long. 78° 46′ and 79° 47′ E. Area, 920 square miles; and population, in 1879, 185,647 souls. It has a slope to the S.S.E. of about 12 feet per mile. The district is bounded on the north by the Kamaon Bhabar, on the east by Nepal and the Philibit division of Bareilly, on the south by the districts of Bareilly and Moradabad and the Rampur State, and on the west by Bijnour. The headquarters of the district are at Naini Tal, where the European officers reside from May to November. It is a long,

narrow strip of country running for about 90 miles east and west along the foot of the Himalayas, with an average breadth of 12 miles. At its northern edge, where the waterless forest of the Bhabar tract ends, a series of springs burst from the surface, and these, increasing and uniting in their progress, form the numerous streams that intersect the Tarai, running in swampy beds. The Deoha becomes navigable at Philibit; the alpine Kosi flows through Kasipur pargana. The Tharu and the Bhuksa have been its permanent inhabitants, and they withstand the malaria of the locality. They claim a Rajput descent.

TARAKESWAR, a village in the Hoogly district of Bengal, in lat. 22° 53' N., and long. 88° 4' E. Famous for its large shrine dedicated to Siva, resorted to by crowds of pilgrims all the year round. At the Sivaratri the three essential rites are,—fasting during the day, and holding a vigil and worshipping Siva as the marvellous and interminable Linga during the night. At the Chaitra Sankranti, on the last day of the month Chaitra (April), is the day of the swinging festival; but the votaries are now merely suspended by a belt, instead of by means of hooks pierced through the fleshy muscles on both sides of the spine.—*Imp. Gaz.*

TARAL, in the Mahratta villages, a guard of the gate. In the Mahratta villages, a low caste man employed as a porter, usually a Mhar.

TARAM. TAM Taramu, TEL. The different classes of village lands.

TARANTARRA, in the Manja territory, the chief city of the Akali Sikhs.

TAR-ASUN, a kind of beer of China, made from barley or wheat, a prepared hop being added to the wort in brewing.—*Simmonds.*

TARAXACUM OFFICINALE. *Wigg.*

Liontodon taraxacum.	Dandelion.
Kan-phul, Dudli, . BEAS.	Dudu battnal, . . SANSK.
Baran. . . . . CHENAB.	Radam, ... ,,
Yauraghi, . . LADAKH.	Shamaukei, . TR.-INDUS.
Dudal, ... RAVI.	Kha, Rasuk, . ,,

This plant is a native of Europe and the Himalayas. The inspissated juice of the plant, the infusion, decoction, and extract of the root, are strongly bitter, and prove tonic and diuretic; in large doses aperient. It is a favourite and useful remedy in the old hepatic diseases of persons who have long resided in India, and returned to a cold climate. The dose of the extract is 3 to 10 grains, thrice daily. Eclipta prostrata, *Roxb.*, the trailing eclipta, a plant of all India, is an excellent substitute.—*Stewart.*

TAR-BAN. HIND. A palmyra grove. Sandarban, HIND., a forest of the Sandar or Acacia sundra.

TARBUSH. TURK. A red cap worn by the Turk. It is a corruption from the Persian Sarposh, head-covering, head-dress. The Anglo-Saxon further debases it to Tarbrush. Fez, the other name for the Tarbush, denotes the place where the best were made. Some Egyptians distinguish between the two, calling the large, high, crimson cap Fez, the small one Tarbush.—*Burton's Mecca.*

TARBUZ. HIND. Cucurbita citrullus, the water-melon.

TARE, Fitch, Vetch, a pulse, Vicia sativa, cultivated in Great Britain principally for its stems and leaves, which are used in the feeding of sheep, horses, and cattle; and partly also for its seed, which is used in the feeding of poultry. —*Faulkner.*

TAREAQ FARUQ or Theriaca Veneta, the modern representative of the mithridatum of the ancients, is sold in little canisters in the bazars of India. On the paper wrapper are printed in Persian, 'the Theria of Andromachus, an invention of Theron the Presbyter. It is prepared, measured, and made public by me, John Baptest Sylvester, in the Rialto, by authority of the excellent Government physicians of ancient righteousness and of the council of apothecaries and learned physicians.' Andromachus was the physician to the emperor Nero. Tareaq is the Greek for treacle, but the drug contains opium.

TAREMOOK, known as Bail Kambar in Canarese, Ghassari in the Dekhani, Lohar in the Mahrati, is a wandering blacksmith of the Peninsula of India.

TARI. HIND. Palm wine from the palmyra tree. A general term for the palm wine of various palms. Nareli from the cocoanut palm, sendi from the date, and tari from the palmyra. —*W.*

TARI, of Chittagong, is the pod of a leguminous plant which grows abundantly in the hills, and is useful for tanning.

TARIKAT. ARAB. A path. In the Muhammadan religion, tarikat means the path or way which leads, or is supposed to lead, to salvation.

TARIKH. ARAB. A date, a history. Gibraltar is Jabl-tarikh, the mountain of the date. Sir Henry M. Elliot's posthumous History of India as told by its own Historians, gives extracts from more than a hundred Tarikhs in Arabic, Persian, and Turki.

TARIKH-i-BADAUNI or Muntakhab-ut-Tawarikh, written by Mulla Abdul-Kadir Malik-Shah of Badaun, and finished in 1595. It is a general history of India from the time of the Ghaznevides to the 40th year of Akbar. It contains a copious notice of the reign and character of Akbar, under whom the author lived.—*Elliot's India; Muller's Lectures*, p. 143.

TARIKH-i-ELCHI NIZAM SHAH, the history of Nizam Shah's ambassador, by Shah Khurshah, who died A.H. 972. This is a general history of the world, compiled from the best known Arabic and Persian sources. The author, in his account of the Safavi dynasty of Persia, tells us that he was sent by his own sovereign, Nizam Shah, on an embassy to Shah Tamasp, at whose court he remained a long time, and from whom he received an autograph account of his own career; of this the Elchi makes considerable use in his work, and it gives it great additional interest.

TARIKH-i-GUZIDA contains a good account of the Moghul dynasties.

TARIKH-i-HIND, a history of India written by Abu Rihan, a translation from an old Arabic history, made about A.D. 1216 (A.H. 613) by Mahomed, then residing at Uch in Sind. The ancient Arabic seems to have been written before A.D. 753. It is largely drawn upon by Nizam-ud-Din, Ferishta, Mir Masum, and others. Chachnama is a Persian work descriptive of the Arab conquest of Sind. The Arab occupation of Sind was only temporary. On their retreat, the territory reverted to the rule of native princes, and was practically independent until its absorption into

the empire during the reign of Akbar, in A.D. 1592, for the successes of Mahmud of Ghazni made no permanent impression on them. Up to the time of Mahomed, the races in Arabia had been quarrelling with and robbing their neighbours. But immediately on his demise, his followers and disciples, whom his teachings had made brothers, moved with a spirit of unanimity.—*Elliot's Hist. of India*, p. 9 ; *Elphin.* p. 264.

TARIKH-i-KASHMIRI, a Persian history of Kashmir in MS. Compiled by Hyder Malik, at the command of Sultan Jahangir, A.H. 1027 (A.D. 1617), from the Sanskrit Raja-Tarangini, and then continued from other sources.

TARIKH-i-RASHIDI, an account of the Khans of Jatah or Moghulistan, and of the Amirs of Kashgar from the time of Taghalaq Timur Khan to A.H. 952. It is the production of a learned and accomplished man, and in the two latter parts of a contemporary distinctly acquainted with the man and events that he describes. The minute details which the author gives of his own sufferings and the sufferings of his nearest relations during the period that followed the ascendency of Shaibani Khan in Mawar-u-nahar and Khorasan, of their escapes, adventures, successes, and discomfitures, let us more into the condition of the country and the feelings of the inhabitants than perhaps any other monument extant. The author, Muhammad Hyder, commonly called Mirza Hyder, was a cousin of Baber, and while a mere boy fought by the latter's side on his victory over the Uzbaks in A.H. 917. He attached himself to the fortunes of his cousin, afterwards khan of Kashgar, and performed for him some brilliant military services, one of them being a successful invasion of Kashmir. On the death of the khan, Muhammad Hyder, who was in Tibet, hearing that his uncle had been put to death by the new sovereign, escaped to Lahore, where he was entertained by Baber's son, Kamran Mirza. In A.H. 946 he joined Humayun, whom he endeavoured to persuade to invade Kashmir, and, being unable to prevail upon him to do so, undertook the expedition himself, made himself master of the country, and ruled it for some years, at first in his own name, and later in that of Humayun. He was killed in a night attack by some rebel chiefs in A.H. 958.

TARIKH-i-SHER SHAHI or Tuhfat-i-Akbar Shahi, a book by Abbas Khan, son of Shaikh Ali, Sarwani, written by order of the emperor Akbar. It is valuable as the writing of a contemporary, but is prolix.—*Elliot, H. of I.* iv.

TARIKH-i-SUBAH-i-SADIK is dated in A.H. 1045 (A.D. 1635) by the author, Muhammad Sadik Isfahani.—*Ouseley's Travels*, ii. p. 405.

TARIKH-i-TABARI, a book which gives the earliest account of the rise of the Muhammadan religion. Its description of the mental agitation of Mahomed, his visions and his alarm at the alienation of his own reason, bear the liveliest marks of truth. A French version has been published in four volumes by M. Hermann Zotenberg, for the Oriental Translation Fund. The original was written in Arabic, and has been translated into both Osmanli and Oriental Turkish. Tabari was a native of Amol, the capital of Tabaristan. His name was Abu Jafar Muhammad ibn Yezid ibn Jerir. He was born A.D. 839, and died at Baghdad 922. He wrote a commentary of the Koran ; also a general history from the creation to A.D. 314–15, which was subsequently abridged and brought down to A.D. 1118–19 by George, son of Al-Amid, generally called Al-Macin.—*Elphin.* p. 256. See Tabari.

TARIKH-i-WASAF, composed, as appears by different dates, at the end of the thirteenth and beginning of the fourteenth century, by Abdullah Shirazi. The style of this work is much admired by the Persians, although in many places so obscure and difficult, that to most copies of it marginal explanations have been added. It contains the history of Hulaku Khan and Chengiz Khan.—*Ouseley's Tr.* i. p. 170.

TARKALANKARA, SANSK., from Tarka, the name of the nyana-darshana, and Alankara, an ornament.

TARKA SANGRUHA, an authoritative work on the Nyaya philosophy. It arranges all speech (vaidikam) into sacred, *i.e.* Vedic, and popular or profane (laukikam).

TARK-ASURA, in Hindu legend, a giant with a petrified head.

TAR KHAN is an old Turkish dignity, and distinguishes such persons as were free from taxation. In the oldest Turkish documents tarku means a letter of protection, a letter of nobility, and in Mongolian (Kowalewsky, p. 1760a), tarkha lakhu means to grant any one a privilege. Amongst the Turanian populations it is a word designating a rank, and amongst the Armenians of Georgia it indicates a freeman. Narshakhi and Tabari write it Terkhun, and suppose it to be a proper name. The Tar Khan title was bestowed by Chengiz Khan on two youths, Bata and Kashlak, who overheard Aung or Prester John making arrangements to destroy Chengiz Khan. From these are said to have descended the Tar Khan dynasties of Khorasan and Turkestan.

The Tar Khan dynasty of Sind are said to have been so denominated by Timur, having sprung from Eku Timur. When Tuktamish Khan was advancing against Timur, he was gallantly opposed by the great-grandson of Arghun Khan, Eku Timur, who fell in the unequal conflict. Timur, who witnessed the conflict, bestowed the title of Tar Khan on his surviving relatives. The origin of this titular term seems, however, doubtful, but it is an ancient one, as Tar Khan of Farghana hospitably entertained the last monarch of Persia in A.D. 703. Tar Khans are mentioned as officers under the Khakan of the Khazar, to the west of the Caspian Sea. Their rule extended to A.D. 1591-92, and with them expired the independence of Sind as a kingdom, its history from that date merging into that of the empire of Timur. Scions of the Tar Khan family still reside at Nasrpur and Thatta.—*Elliot, Hist. of India*, p. 500 ; *Arminius Vambery's Bokhara*, p. 27.

TARN-TARN, a town in the Amritsar district of the Panjab, in lat. 30° 28′ N., and long. 74° 57′ E., 12 miles south of Amritsar town. It was founded by Guru Arjun, son and successor of Guru Ram Das. Arjun built a temple in the town, and at its side a magnificent tank, and the waters are said to cure all persons who can swim across it.

TAROBA, a lake in the Chanda district of the Central Provinces, 14 miles east of Segaon, in a basin of the Chimur Hills. It is of great depth. The lake attracts many worshippers, wives yearning for children, and the sick praying for health.

It is believed to have been miraculously produced.

TARSHISH, of sacred history, is supposed by Sir. J. E. Tennent to be Galle. But Tarshish seems to have been a name given to several places, one of them in India, as the Dante, Kapi, and Togai of the Hebrew Bible are Indian names for ivory, apes, and peacocks,—Dant, HIND., a tooth; Kapi, TAM., a monkey; Togai, a peacock.

TARSIUS SPECTRUM. *Geoff.*

Tarsius bancanus, *Horsf.*	Lemur tarsier, *Raffles.*
Lemur spectrum, *Pallas.*	Tarsier, *Buffon.*
Didelphis macrotarsus, *Sc.*	

The tarsier inhabits Sumatra, Banca, Borneo, Macassar, Salayer. Its habits are nocturnal. It is mild, gentle, and easily domesticated. It lives on the tops of trees in the large damp forests. It eats fruits and small animals. The inhabitants have a superstitious dread of it.

TARTAR.

Wynstin, ...	DUT.	Roher Weinstein, .	GER.
Crude tartar, . .	ENG.	Tartaro volgare, . .	IT.
Argol, Argal, . .	,,	Tartarus, ...	LAT.
Tartre-cru, . . .	FR.	Tartaro, . .	PORT., SP.
Blanc et rouge, . .	,,	Winnui kamen, . .	RUS.

An acidulous salt, which exists in the juice of the grape, and is deposited in wine casks in the form of a crystallized incrustation more or less thick, which is crude tartar or argol. It is either white or red, according to the colour of the wine. The former is preferred, as it contains fewer impurities than the red, but the properties of both are essentially the same. When good, it is thick, hard, brittle, and brilliant, with but little earthy matter. It is obtained from Florence, Naples, Sicily, and Cape of Good Hope, and is used in hat-making, gilding, dyeing, and in the preparation of tartaric acid.—*Waterstone; Faulkner.*

TARTAR, Tatar, or Tahtah, a term very vaguely and variously applied, but generally to Mongoloid races in High Asia. It is now out of use by all ethnologists. The Bhot of the Himalayan frontier of Tibet are called Tartars, as also are the Turks of Khoten and Yarkand or Little Bokhara, and the Manchu of China are called a Tartar dynasty. The Tartars of China, however, are Manchurian Tangus. The peoples who inhabit the vast regions of High Asia, bounded on the south by India, China, and Persia, on the east by the Sea of Japan, on the west by the rivers which disembogue into the Caspian Sea and Black Sea, and on the north by the Frozen Ocean, are all known in Europe by the collective name of Tartar. The term is applied to numerous half-civilised nations, who greatly differ from each other, to—

'The Tartars of the Oxus, the king's guard,
First, with black sheepskin caps and with long spears;
Large men, large steeds, who from Bokhara come,
And Khiva, and ferment the milk of mares:
Next, the more temperate Turkmans of the south,
The Tukas and the lances of Salore,
And those from Attruck and the Caspian sands;
Light men, and on light steeds, who only drink
The acrid milk of camels and their wells:
And then a swarm of wandering horse, who came
From far, and a more doubtful service own'd,—
The Tartars of Ferghana from the banks
Of the Jaxartes, men with scanty beards,
And close-cut scull-caps; and those wilder hordes
Who roam over Kipchak and the northern waste,
Kalmuks and unkempt Kuzzaks, tribes who stray
Nearest the Pole, and wandering Kirghizes
Who came on shaggy ponies from Pamere.'

'Les peuples qui habitent ces vastes contrées de la haut Asie, bornées au midi par l'Inde, la Chine, et la Perse, à l'orient par la mer du Japon, à l'occident par les fleuves qui se jettent dans le mer Caspienne et la Pont Euxin, au nord enfin par la mer glaciale, sont connus sous le nom vulgaire et collectif de Tartars. . . . Quoi qu'il en soit de l'origine de ce nom des Tatars, les Européens, qui l'ont légèrement altéré, s'en servent indifféremment pour designer une foule de nations à demi civilisées, qui different beaucoup entre elles, ainsi que la surite de cet ouvrage le fera vois. Dans ce sens, je crois qu'il est bon de conserver à ces nations le nom cellectif de Tartares, quoique corrompu préférablement à celui de Tatârs, qui paroît plus correct mais qui appartient à un seul tribu ne doit pas servir à designer les autres tribus en général.'

It was from Tartary those people came, who, under the successive names of Cymbrian, Kelt, and Gaul, possessed all the northern part of Europe. The Goths, Huns, Alans, Swedes, Vandals, and Franks were but swarms of the same hive. The name of Tatar, the terror of Asia and Europe, was applied promiscuously to all the nomadic warriors whom Asia in bygone years poured forth over Europe. Originally Tatar was a name for the Mongolic races, but, through their political ascendency in Asia after Chengiz Khan, it became usual to call all the tribes which were under Mongolian sway by the name of Tatar.

In linguistic works, Tataric is now used in two several senses. Following the example of writers of the middle ages, Tataric, like Scythian in Greek, has been fixed upon as the general term comprising all languages spoken by the nomadic tribes of Asia. Hence it is used sometimes in the same sense in which we use Turanian. Secondly, Tataric has become the name of that class of Turanian languages of which the Turkish is the most prominent member. While the Mongolic class—that which, in fact, has the greatest claims to the name of Tataric—is never so called, it has become an almost universal custom to apply this name to the third or Turkic branch of the Aral-Altaic division, and the races belonging to the branch have in many instances themselves adopted the name. These Turki, or, as they are more commonly called, Tataric races, were settled on the northern side of the Caspian Sea and on the Black Sea, and were known as Komanes, Pesheneg, and Bulgar, when conquered by the Mongolic army of the son of Chengiz Khan, who founded the Kapchakian empire, extending from the Dniester to the Yemba and the Kirghizian steppes. Russia, for two centuries, was under the sway of these khans, known as the khans of the Golden Horde. This empire was dissolved towards the end of the fifteenth century, and several smaller kingdoms rose out of its ruins, among which Krim, Kasan, and Astracan were the most important. The princes of these kingdoms still gloried in their descent from Chengiz Khan, and had hence a right to the name of Mongol or Tatar. But their armies, and subjects also, who were of Turki blood, received the name of their princes; and their language continued to be called Tataric even after the tribes by whom they were spoken had been brought under the Russian sceptre, and

were no longer governed by khans of Mongolic or Tataric origin.

It would perhaps be desirable to use Turkic instead of Tataric, when speaking of the third branch of the northern division of the Turanian family, did not a change of terminology generally produce as much confusion as it remedies. The recollection of their non-Tataric, *i.e.* non-Mongolic origin, remains, it appears, among the so-called Tatars of Kasan and Astracan. If asked whether they are Tatars, they reply no; and they call their language Turki or Turuk, but not Tatari. Nay, they consider Tatar as a term of abuse, synonymous with robber, evidently from a recollection that their ancestors had once been conquered and enslaved by Mongolic, that is, Tataric tribes. All this rests on the authority of Klaproth, who during his stay in Russia had great opportunities of studying the languages spoken on the frontiers of this half Asiatic empire. Though the word is very vaguely used, the populations to whom it is applied belong to one of three great groups, stocks, or families,—the Turk, the Mongol, or the Tungus. It is necessary to insist upon this, because, whatever may be the laxity with which the term Tatar is used, it is, in Russian ethnology at least, a misnomer when applied to a Mongol. It is still worse to call a Turk a Kalmuk. This is because the populations under consideration are the fragments of four Turkish kingdoms or khanates, the khanates themselves being the fragments of the great Mongol empire of the Kapchak. But this great empire itself was, more or less, the consolidation of at least two older kingdoms compressed into one. There were the Mongols of Temudzhin or Chengiz Khan. There were the Chaghtai Turk of Timur and his successors, whose origin was in the parts beyond the Oxus, Bokhara, and Ferghana. There were the three denominations of the Khazar, the Pesheneg, and the Cumanian, the Chaghtai being the Turk of the dynasty to which Timur belonged.

According to Mountstuart Elphinstone, the Tartar are divisible into Turk, Mongol, and Manchu. The greater part of Timur's army was Turk; and the Uzbak, who now possess Transoxiana, the Turkoman, who reside both on the Oxus and in Asia Minor, the wandering tribes of the north of Persia, and the Othmanli or Turk of Constantinople, are all Turk. The ruling tribe, and the greater part of the army of Chengiz Khan, was Mongol.

Tartars occupy Ladakh, except in the Dras valley. In all Tartar families there, the second son is made a lama, and the third a tola, both being forbidden to marry,—in a manner obliged to renounce the world, having no interest in their father's property at his death.

Of the black Tartars, who had come from Tartary with Timur, he had settled part in Turkey, and part in Khorasan. After his death they had dispersed. Nadir Shah had desired to reassemble them, and seven or eight thousand families had been brought together under Najif Ali Khan, the chief in whose service Is'hak Khan and his father was employed.

The Tzeremish resemble the Tartars in their external appearance, and they also wear their hair short; but their language is totally distinct, and they spring from a different origin. They are the original inhabitants of the province of Cazan and O-se-ta-our-han. — *Latham Nationalities of Europe*, i. p. 349; *Recherches sur les Langues Tartares*, pp. 1, 3; *Kennedy on the Origin of Languages*, p. 57; *Malcolm's History of Persia*, ii. p. 226; *Muller's Lectures*, pp. 284, 285.

TARTARA or Koh-i-Rasul, a peak of the Khaibar range of mountains, rising 6822 feet above the sea. It has been proposed as a sanatorium for the British troops of the Peshawur district.—*Lieut.-Col. MacGregor*, iii. p. 186.

TARTARIAN LAMB. ENG. Aspidium barometz, so enthusiastically described by Darwin in his Botanic Garden, has long been celebrated in China. The ingenuity of Chinese gardeners, taking advantage of the natural habits of the plant, form it into a shape resembling a sheep or other object.—*Williams' Middle Kingdom*, p. 275.

TARTUS, the ancient town of Orthosia, on the sea-shore opposite the island of Ruad, the Arphad of the Hebrew Scriptures, and the Aradus of the Greeks and Romans. It was from this place that the wood of Mount Libanus was conveyed in floats to Phœnicia, and not from Tarsus, which is a city in the interior of Celicia, 24 miles from Mersina, its seaport.

TARU or Khu-hta are the most northern of the tribes of Burma with whose language any acquaintance has been made. They speak a dialect of Pwo. The Taru dwell north and east of the Ka, and west of the Red Karen. The Burmese call them Belu, but they style themselves Khuhta. They shave the head, leaving two side locks.—*Mason, Burma*, pp. 642, 643.

TARWAAD, on the Malabar coast, a family community living according to the Marumakatayam rule of inheritance, or descensus a matrice, with a karnaven or head. A united family amongst the Polyandric races; in Malealam Tarawata. See Polyandry.

TASA or Tasha Murfa, a drum of a semicircular shape, played upon with two sticks, and invariably accompanied by the murfa.

TASADUQ. ARAB. Alms, an offering, a sacrifice.

TASBIH. ARAB., HIND., PERS. A rosary. A Muhammadan rosary consists of 99 beads, sometimes more, to stand for certain prayers. All Muhammadans usually carry a chaplet of this description. Amulets are also worn on the person as a protection from evil. These are portions of the Koran, or the whole book, written exceedingly small, enclosed in cases, and bound on the arm; cornelians and bits of coloured glass having the name of God and verses of the Koran engraved on them.

TASH, cloth interwoven with gold or silver thread. A fabric made at Benares and Lucknow.

TASHHIR. HIND. A public disgraceful punishment in the time of the emperors of India. The culprit had his face blackened, and was made to ride, with his face to the tail, on a donkey through the streets of the city. It was discontinued in British India about the middle of the 19th century.

TASHKEND, the capital of the Russian possessions in Central Asia, and the residence of the Russian Governor-General, has an estimated population of 120,000. A Russian town has grown up outside the ancient walls, and Tashkend is the superior of its former rivals, Khokand, Bokhara, and Samarcand. From one side to the

other the maze of streets stretch six miles across, and the circumference of the lofty clay-built walls is nearly seventeen. The supply of water is lavish, a broad canal bringing it from the Tchirtchik, sixteen miles distant, to the city walls, and with four branches and numerous ramifications convey it to every street in Tashkend. For miles the country is covered with orchards and gardens. Beyond the gardens is the steppe or prairie, stretching forty miles on the one hand, to the Syr Darya river, and, on the other, thirty miles to the mountains of Tchatkal. The steppe is thickly dotted with villages embosomed in orchards. From Kojend to Fort Perovsky, a distance of some 900 miles, and eastward as far as the Aksai and Kara Tau range, there is a stretch of fertile territory capable of being made one of the finest provinces in the Russian empire. Along this valley are evidences of former cities, compared with which Tashkend is an insignificant town, and its population a poor and obscure community.

TASHRIH-ul-AKWAM, a work by Colonel James Skinner on the origin of Hindu castes.

TASLIMAT. Arab. Obeisances to persons of rank.

TASMAH BAZEE, a term applied in Hindustan to a class of Thugs, professional murderers, who destroyed their victims by means of a tasmah or belt.

TASMAN. Abel Janssen Tasman, an eminent Dutch navigator, who in A.D. 1642 discovered New Zealand, also the Tonga Islands or Hapai group, and Van Diemen's Land, 24th November 1642, and named by him after Maria Van Diemen, the beautiful daughter of the Dutch Governor of Batavia. Owing to the prejudice which was found to deter British emigrants, the name of Van Diemen's Land was changed about the year 1840 to Tasmania, in honour of its susceptible and romantic discoverer. It was not known to be an island until explored by Flinders, who, with Bass, discovered Bass' Strait in 1799. Tasman discovered the Fiji Islands in 1643. The western shore of Tasmania is rocky and sterile, with reefs of three or four miles. The E. and S.E. coasts are bold. Hobart Town, the seat of government, is in lat. 42° 53½′ S., and long. 147° 22½′ E. It is built on the west shore of Derwent river, at the foot of Mount Wellington.

TA-SOUNG-DOING. Burm. The lamp-post festival in the month Ta-soung; before each house evening lamps are lit. It is the Chinese feast of lanterns, and supposed to be the great festival of the Pleiades, held in ancient times in November. Small fire-boats and rafts are launched, each with a number of lights on them, and as they float with the current are anxiously watched by the people who launch them. The same custom prevails in Hindustan. See Khaja Khizr.

TAT. Beng. Corchorus olitorius. Gunny, coarse matting made of sunn and other materials. A matted screen.

TA-TA-MI. Jap. House mats 5¾ feet by 3 feet, stuffed to a thickness of 2½ inches, and covered with a finely-woven substance.

TATHAGATA, one who goes in like manner; an appellation of Gautama, implying that he came in the same way as the previous Buddhas.—*Hardy, E. Mon.*

TATI BELLAM. Tel. Sugar from Borassus flabelliformis, palmyra sugar. Tati-chettu, the tree; Tati-gedda, also Tati-kalangu, the root; Tati-nar, the fibre; Tati-pandu, the fruit; Tati-kallu, the palm wine.

TA-TSIAN-LOO, the border town and customs station of Western China. Beyond this point, a handful of tea, a few needles, or a few yards of white or blue thread, are of more value than gold, silver, or copper coin; indeed, the latter are useless, while sycee silver and rupees are only exchanged at a considerable loss. Leaving behind the magnificent gorge of Ta-tsian-loo, with its perpendicular walls of mountains, travellers follow up the stream which, flowing through it, joins the Tatow-ho at the foot of the gorge; by noon they can reach the summit of the Jeddo range of mountains, which may be said to form the great natural wall of Western China. From this point, two days' journey brings them to the little town of Hokow, situated on the left bank of the river Yarlong, a tributary of the Kin-char or Yang-tse river.—*Geog. Soc.*, 1870.

TATTA, Thato, or Nagar Thato, a small town in Sind, in lat. 24° 44′ N., long. 68° E., on the right bank of the Indus, at the head of the delta of the Indus. It is built on a slight eminence at the foot of the Makli Hills, and is notoriously unhealthy. It was founded A.D. 1445, by a Samma prince, Jam Nizam-u-Din, and was pillaged by the Portuguese in 1555.

Maurice states that Tatta is the Daibul of the Persian tables of Sir William Jones. The statement is made by Ferishta, who was probably followed by Maurice; but Elphinstone shows (Book v. chap. 1) that Tatta cannot be the Dival or Dewal celebrated for the siege by the Arabs under Muhammad Kasim in A.D. 711. The point has been discussed also by Rennell, Burton, and many other writers, but with no satisfactory result.—*Cal. Rev.*, Jan. 1871; *Burnes' Sind.*

TATTOOING the body with various figures of animals or plants, or with scrolls, has been in use from the most ancient times. It was forbidden by Moses in the Levitical law; it was not known among the Copts, but must always have been in use among the Lower Egyptians. It was used by the Arab prisoners of Rameses, and is practised by the Egyptian Arabs and Arab women of the present day. On the return of Philpator to Egypt, he showed his hatred of the Jewish nation by his treatment of the Jews in Alexandria. He made a law that they should lose the rank of Macedonians, and he enrolled them among the class of Egyptians. He ordered them to have their bodies marked with pricks, in the form of an ivy leaf, in honour of Bacchus; and those who refused to have this done were outlawed, or forbidden to enter the courts of justice. The king himself had an ivy leaf marked with pricks upon his forehead, from which he received the nickname of Gallus. The fellaheen or country women of Palestine generally tattoo stars and dots, with gunpowder, on their foreheads, lips, chins, breasts, arms, hands, and feet. The tattooing of women is a practice very prevalent amongst several of the races in Persia, and dots and marks are used by Arab women. The Muhammadans of India do not tattoo or mark their skins in any way, neither men nor women, but most of the women of the Dravidian races mark their forearms, from the wrist to the elbow, with scrolls. The Kharria, Juanga, Munda, Ho, Kol, and Oraon girls have

lines tattooed on the forehead and temple, and dots on the chin and nose. The Singbhum girls have a tattooed arrow. Oraon boys have severely tattooed arms. The Ho use the mark of an arrow. It is called godna, also godni, by the Mahrattas. The Kharria women are all tattooed with the marks on the forehead and temples,—three parallel lines on the forehead, the outer lines terminating at the upper end in a crook, and two on each temple. The marks of the Juanga women are larger, and those of the Munda are smaller than the Kharria marks. In Southern India almost all Sudra and Pariah women have tattooing marks on them. A blue line runs down the forehead to the root of the nose, a practice which some of the Sudra men and women of the Smartta Brahmans also follow. The women also have their forearms tattooed with flowers, and the men put a scorpion on the hollow between the thumb and forefinger of the right hand. These hand and forearm marks are for ornament, but the forehead mark is now regarded as a sectarian Hindu mark. The Khand, also higher Abor tribes, tattoo. The Abor Naga clans do not permit marriage until their faces are elaborately tattooed and disfigured; and the practice prevails among the Simang and Binua and other Ultra-Indian and Asianesian tribes. The Kol and Oraon women are all marked with the godna tattooing, the Agareah women (agricultural) on the arms and legs.

The faces of the Khyen women, near the Irawadi, are all tattooed over with deep blue marks, a custom introduced avowedly to make them unattractive, but is being discontinued under British rule.

Every male Burman is tattooed in his boyhood from the waist to the knees; in fact, he has a pair of breeches tattooed on him. The pattern is a fanciful medley of animals and arabesques, but it is scarcely distinguishable save as a general tint, excepting on a rather fair skin; tracing on various parts the figures of animals or plants, in a manner so pleasing that British officers have often been attracted to submit to the painful and barbarous process. Tattooing of the Burman lads is not unfrequently followed by sloughing and death. In Fiji this practice is confined to the women, the operation being performed by members of their own sex, and applied solely to the corners of the mouth, and those parts of the body covered by the scanty clothing worn by them. The skin is punctured by an instrument made of bone, or by the spines of the shaddock tree, whilst the dye injected into the punctures is obtained chiefly from the candle-nut, Aleurites triloba. They believe that the custom was commanded by Degei, their supreme deity. Neglect of this divine commandment is believed to be punished after death. In Polynesia the practice seems to have attained its culminating point in the Society Islands and the Marquesas, where both men and women submitted to it; in Samoa and Tonga, it is restricted to the men, in Fiji to the women, and altogether ceasing in the New Hebrides. Tradition, however, asserts that the custom was known in Fiji before its being adopted in Samoa or Tonga. Two goddesses, Taema and Tilafainga, swam from Fiji to Samoa, and on reaching the latter group, commenced singing, 'Tattoo the men but not the women.' Hence the two were worshipped as the presiding deities by those who followed tattooing as a trade.

A race in Japan tattoo their skins. Tattooing is practised in the Admiralty Islands, chiefly by the women. Most of the men have circular cicatrizations. Erskine, in his Course in the Pacific, mentions that the natives of the Samoan or Navigators' Islands have exactly the same fashion. The tattooing in Tahiti has greatly decreased; formerly the bodies were completely covered over with beautiful figures, exhibiting every variety of curve, with animals, flowers, and the sprigs and branches of trees.

Tattooing in the Society Islands was done by professional men who travelled about the country. The instruments used were bits of bone cut into the shape of small combs, and the soot of burned candle-nut.—*Skinner's Overland Journey*, ii. p. 208; *Montgomery*, p. 127; *Galton's Vacation Tourists; Sharpe's Egypt*, i. p. 344; *De Bode's Travels*, p. 85; *Dalton, Ethnol. of Bengal; Yule*, p. 151; *Jenkins' American Expedition*, p. 164.

TATVARAYAR, a Saiva ascetic of the 17th century, who was of the Tamil people. He wrote numerous works in the Tamil language.

TATWA SAMASA, a text-book of the Sankhya philosophy, attributed to Kapila.—*Dowson.*

TAU. CHIN. The various kinds of pulse which form part of the sixth of the sixteen classes into which all medicinal and natural history substances are classed, in the Pen Tsau, a Chinese work on medicine. Abrus seeds, cardamom fruits, nutmegs, etc., are all called tau. Tau-fu is pulse-curd.

TAU of the Egyptians, a cross, anciently a symbol of the generative power, was transformed into the Bacchic mysteries. Such a cross was found on the wall of a house in Pompeii, in juxtaposition with the phallus, with symbols embodying the same idea.

The mystic Tau, or standard of the cross, as it has been called, formed just half of the Labarum, or idolatrous standard of the pagans. The Labarum bore at once the crescent and the cross; the crescent as the emblem of Astarte, the queen of heaven, and the cross as the emblem of Bacchus.

TAURIS, the modern Tabreez, was the capital of more than one dynasty, and throughout the middle ages was a chief point of contact and trade between the Latin and oriental worlds. It has been identified, not only with Shushan of Esther and the Achmetha of the Apocrypha, but with the Northern Ecbatana and half-a-dozen other ancient cities of fame. Rawlinson, however, considers it not to be older than the 3d century. —*Yule, Cathay*, i. p. 48; *Mignan's Travels*, p. 334.

TAURUS, the name applied by ancient geographers to the lower and outer spurs of the Kurdistan range. There is no Taurus range, but the ancients supposed it to begin near the shores of the Archipelago, and extend 1000 miles to the sources of the Euphrates.—*MacGregor.*

TAUTANG, the name of a tribe whom the Heuma populations describe as living beyond their boundary. See Mowtu.

TAUT'H. SANSK. Father, supposed to be the Teuthes and Tot'h, the Mercury of Egypt.—*Yod.*

TAVALAM, a term which, substituting bullocks for camels, is equivalent to a caravan. The class of persons engaged in the traffic in Ceylon, of carrying light loads on pack oxen, who resemble

in their occupations the Banjara of Hindustan. — *Tennent, Ceylon*, p. 53.

TAVERNIER, JEAN BAPTISTE, Ecuyer, Baron d'Aubonne, a traveller in India from 1663 to 1669, and the history written by him merits mention for the fidelity of his description of countries little known. He was by birth a Swiss, and the son of a very able geographer; and he himself was the greatest traveller of his age. Besides his European travels in the early part of his life, he spent forty years in six journeys into Turkey, Persia, and India, and entered deeply into commerce, chiefly in that of jewels. He determined on a seventh voyage, but died on the road, at Moscow, in 1689, aged 84. The history of his six travels has been repeatedly printed, at Paris in 1676-77, at Rouen in 1713, in English in 1688. After the Jesuits, the earliest notices of India were by Bernier (A.D. 1658–1670), followed by Tavernier.—*Pennant's Hindustan; Bjornstjerna.*

TAVERNIERA NUMMULARIA. *D. C.* An undershrub of Afghanistan, Panjab, and Sind, one of the Fabaceæ. Its leaves are used as a poultice in sloughing ulcers.—*Murray.*

TAVIZ. PERS. A charm. The practice of binding sentences of the Koran on the arm would seem to be alluded to in Deuteronomy xi. 18: 'Therefore shall ye lay up these my words in your heart, and in your soul, and bind them for a sign upon your hand, that they may be as frontlets between your eyes.' The extract is usually a slip of paper with a quotation from Holy Writ, some curious spell to avert the evil eye, or a song to some dead saint. These are the characts of ancient days, commonly used in different parts of Europe. Most Muhammadans of India carry about with them or keep in their homes some form of taviz.—*Burton's Scinde*, i. p. 280.

TAVOY, a small island off the coast of Tenasserim, to the south of the mouth of the Tavoy river. It extends from lat. 12° 55′ to 13° 13′ N., and from long. 98° 17′ to 98° 23′ E., and is about 18 miles long by 2 broad. On the east there is an excellent harbour. The swallow that forms the edible nest, builds in its caves. Tavoy Island gives its name to a district on the mainland, with an area of 7200 square miles, and a population of 71,827 in 1872. The main range of the Yoma rises in places to a height of 5000 feet, and with its densely wooded spurs forms an impassable barrier between the British and Siamese territories. Gold is washed for; there are hot sulphurous springs, with a temperature of 119° Fahr., and saline springs at 144°, and valuable timber trees. Tavoy Island is the most northern of the group called the Mergui Archipelago. Tavoy town is on the left bank of the Tavoy river, and was taken by the British on the 15th September 1824. In the neighbourhood of Tavoy are two sacred lakes, two small currentless basins in the Pagaya river at the foot of pagoda-crowned precipices, 100 to 200 feet high. A fish, a species of barbel (Barbus Mortonius), is held sacred to the pagodas by the Buddhists, and come in shoals for rice thrown to them by passers-by, as fearless of man as the barking deer that drinks their waters.

TAWURI, T'hori, or Tori, a race dwelling in the desert of Rajputana. These engrossed the distinctive epithet of Bhoot or evil spirits, and the yet more emphatic title of sons of the devil. They ranked with the Bawuri, Khengar, and other professional thieves scattered over Rajputana, who would bring either your enemy's head or the turband from it. They are found in the t'huls of Daodputra, Beejnote, Noke, Noakote, and Oodur. They are proprietors of camels, which they hire out, and also find employment as convoys to caravans.

TAWWAF. ARAB. Circumambulation, the procession of the Muhammadan pilgrims round the Kaba at Mecca. Tawwaf bait Allah-ul-Harām, circumambulation of the sacred house of God, which the pilgrims are enjoined by the Koran to do seven times, the first three in a quick, the last four in a calm, ordinary pace; and each time that they pass the Black Stone, Hajar-ul-Aswad, they kiss it or touch it with the hand, which they immediately apply to their lips. The stone is set in silver, at the south-east corner of the Kaba at Mecca-i-Sharif, and is about seven spans from the ground. Tayf is the participle of the Arabic verb Tafa, which signifies to go round; but is especially applied to the religious ceremony of Muhammadan pilgrims going round the Kaba at Mecca. It is the encircling of holy places so often alluded to in the Old Testament, and still practised by Buddhists, Hindus, Christians, and Muhammadans. Psalm xxvi. 6 says, 'I will wash mine hands in innocency: so will I compass thine altar, O Lord.' Hindu women often compass their husbands, as in Jeremiah xxxi. 22. Hindus and Buddhists circle from right to left, Romish priests and Muhammadans from left to right. The Persian couplet says, Tuaf-i-Kaaba-i-dil kun, gar dili dari, Circle the holy place of your heart if you have a heart. The Hajar-ul-Aswad is set in silver, and is believed by Muhammadans to have fallen from paradise to the earth, along with Adam. It remained where it fell until the deluge, when it was again taken up to heaven, but was brought back by the angel Gabriel to Abraham, when he was building the Kaba. It is believed by them to have been white originally, but to have become black from being kissed by a woman when unwell. The Tawwaf is the Pradakshana of the Hindus.—*Hamilton's Sinai*, p. 152.

TAXATION. The taxation per head in the principal Native States stands thus:—Travancore, 3 rupees 12 annas; Patiala, 1 rupee 14 annas; Udaipur, 2 rupees; Jeypore, 2 rupees 10 annas; Jodhpur, 2 rupees; Ulwar, 2 rupees; and Sindia, 7 annas per head.

TAXIDIA LEUCURA, the Tibetan badger, Thumpha of the Tibetans, inhabits the plains of Tibet; total length, 37 inches, whereof the tail with the hair is 10 inches, and without it 7. The aspect is entirely that of a long-tailed badger, with somewhat smaller head and longer, finer fur than usual. The small head is conico-depressed, with remote ears and eyes, and sharp elongated face. The small pig-like eyes are situated midway between the ears and tip of the snout. The ears are oval, well developed, and tending to a point. —*Mr. Hodgson in Journ. Ben. As. Soc.*

TAXILA. General Cunningham has identified this ancient city with Deri Shahan, or Shah Dheri, a village in the Rawal Pindi district of the Panjab, in lat. 33° 17′ N., and long. 72° 49′ 15″ E. The existing remains extend over an area of six square miles, among them many large monasteries and st'hupas.

The Takka race originally held all the Sind-Sagur Doab; and Arrian describes their chief town, Taxila or Takshasila, as a large and wealthy city, the most populous between the Indus and the Jhelum (Hydaspes). The city stood a few miles north of the Margala pass, where several mounds still mark the sites of its principal buildings. Alexander the Great rested his army at this point for three days, and was royally entertained by the reigning sovereign. Fa Hian, a Buddhist pilgrim from China, visited Taxila about A.D. 400, and was followed in 630-643 by his countryman and co-religionist, Hiwen Thsang, who found that the seat of government had been removed to Kashmir.

The ruins consist of six separate portions. Of these, the mound of Bir, close to Deri Shahan, has furnished many coins and precious stones. Hatial, a fortified spur of the Margala range, probably formed the ancient citadel; it is enclosed by a round wall, and crowned by a large bastion or tower. Sir-Kap presents the appearance of a supplementary fortress, united with the citadel by a wall of circumvallation. Kacha-Kat is supposed to have been for the security of the elephants and cattle. Babar-Khana contains the remains of a st'hupa, which General Cunningham has identified with that of Asoka, mentioned by Hiwen Thsang. —*Imp. Gaz.*

TAXUS BACCATA. *Linn.* Himalayan Yew.

Rakhal, ... BEAS.	Kautu, ... KASH.
Nharey, ... BHOT.	Tuno, ... KULU.
Thuneer, Zurnub, . HIND.	Dhnui kunt'h, . . RAVI.
Thunu, . . . JHELUM.	Chogu, ... ,,
Birmi, . JHELUM, RAVI.	Rakhai, Nyamdal, SUTLEJ.
Sungal, Postil, . . KASH.	Kadenru, ... ,,
Tung, ... ,,	Sarap, Badar, TRANS-IND.

This tree occurs in many parts of the Panjab Himalaya, up to the Indus, at from 5000 to 10,000 feet, but sparingly in almost all except in parts of Hazara, where it is pretty common. It is found in the Sutlej valley, between Rampur and Sungnam, at an elevation of 9000 to 10,500 feet. It has a hard, heavy, strong red wood, tolerably elastic, used for making native bedsteads, in some parts for jampan poles, buggy shafts, and on the Sutlej for bows. The wood of an old tree is of a fine red colour it polishes well, and seems adapted for upholstery purposes; it is well fitted for turning, and Vigne states that in Kashmir it is used for making clogs. The leaves are sold in the bazars of the N.W. Provinces of India, under the name of burmee or zurnub, and are used by the natives as an expectorant in catarrh; administered in powder in doses of gr. xlv., or in decoction. Its appearance and form of growth vary much when it grows in the higher latitudes and when growing in deep forests. It is a large tree with naked trunk. It is often of great thickness, but seldom attains any great height; the thick trunk generally dwindles away or divides into branches at a few feet above the ground. On the skirts of the forests it is almost a prostrate bush, while on open slopes it becomes a stout, dense, and tabular branched tree. T. cuspidata, *S. and Z.*, and T. adpussa, *Knight*, are trees of Japan.—*Hooker*, i. p. 45; *Lt.-Col. Lake; Cleghorn.*

TAYAMMUM. ARAB., HIND. Purifying the hands by rubbing with sand. When water cannot be obtained for their ceremonial ablution before prayers, Muhammadans clap the palms of their hands upon the sand, and draw them once or twice down the face and both forearms. This is performed once; it varies in different schools. —*Burton's Mecca*, i. p. 385.

TAYE, a fish of Japan, which sells at a high price.

TAYF. At a short distance, near the Bab-ul-Yemen gate, outside the town of Tayf, to the west, a five-sided block of granite, rising in a slant from the ground, is pointed out as the idol Lat. In its greatest length it measures about 12 feet, and 4½ to its highest edge. Another idol of the old Arabs, El Izzah, is within the town; like the Lat, it is an unhewn stone, with a depression or hollow on the north side, resembling a water-worn boulder. They are mentioned in the chapter of the Koran called the Star, liii. 19-23: 'What think you of El Lat and Izzah and Marrat, the third? They are but names you and your fathers have given them.' El Lat was adored at Tayf, but there is not only, Burton believes, no ancient authority for placing the worship of El Izzah here, it does not even seem to have been a stone, but rather the trunk of a tree or a wooden image, which was burned by Mahomed's order. The dimensions of the stones pointed out as El Lat correspond to the description given by Herodotus and his commentator of the idol Alilat, Αλιλατ or Αλιατ, whom he compares to Urania. Lat may not improbably have been such a stone as that pointed out to Hamilton. That it was this identical one, Burton cannot help doubting, notwithstanding the tradition of the place. Herodotus mentions another deity, Urotalt, Ουροταλτ, whom he identifies with the great Bacchus; but this can hardly be other than a slight corruption of the title of the Supreme God (Allah taalah), the r and l being easily convertible sounds.—*Hamilton's Senai, Hedjaz, Soudan*, pp. 150, 151; *Burton's Pilgrimage.*

TAYLOR, DR. JAMES, author of Topography of Dacca, Calcutta 1840.

TAYLOR, MAJOR JOHN, author of Travels from England to India in 1789, by the way of Venice, Aleppo, and over the Great Desert to Bussora.

TAYLOR, COLONEL MEADOWS, rose in the Nizam's service. He wrote Memoirs of a Thug, 3 vols., 1840; also on Celtic Remains near Ferozabad, Dekhan, in Bom. As. Trans., 1851-52; also Tara, and other works of fiction.

TAYLOR, THOMAS G., Astronomer, Madras Observatory, author of General Catalogue of the Fixed Stars, from Observations made at Madras from 1830-43, 4to, Madras 1844; Result of Astronomical Observations made at Madras, from 1831-37, 4 vols., Madras 1832-38.

TAYLOR, REV. W., of Madras, author of an Account of the Seven Pagodas, in Mad. Lit. Trans., 1844, i. p. 50; on Supposed Early Celtic and Scythian Vestiges in various parts of the Carnatic, ibid., 1847-48; editor of the Mackenzie Manuscripts.

TAYUMANAVAR, the greatest of Tamil poets, wrote in pure, plain Tamil.

TAZIA KHANA, the house of mourning, or Ashur khana. The Tazia, a model of the tomb of Hasan and Husain at Kirbala. The Muhammadans in India carry it in procession in the Maharram.

TAZKIRA. ARAB. A notice of poets; any memoir.

TA-ZOUNG. BURM. An ornamented shed or roof over an image of Gautama.

TCH, in the English language, occurs only in

foreign words, and only then to meet the spellings of the other nations of Europe, in order to obtain the sound of the English ch, as in charge, chesnut, chivalry, and church.

TCHE-KIANG, a province in China, one of the most considerable in extent, riches, and population. It contains 11 cities of the first rank, 72 of the third, and 18 fortresses, which in Europe would be deemed large cities.

TCHERKAS or Tcherkess, the Circassia of Europeans, a country on the northern face of the Caucasus. It contains many tribes of various appearance and dignity; some of them allege an Arab descent, others are Tartars. The Chetchinzi were considered the most formidable of all the tribes which inhabit the innumerable rocky valleys of the eastern line of the Caucasus. Their predatory excursions, whether in large or small bodies, were not only a dread to their own immediate neighbours, tribes like themselves, though of less extent and power, but their sudden descents, ambuscades, and continued warfare, kept the disciplined Russians constantly on the alert. These lords of the mountains seemed never to rest, day nor night. Unwearied in their watch for prey, like lightning in attack, for they struck or were lost to sight as quickly. As the Muhammadan was the last religion attempted to be introduced amongst these people, they suppose themselves to be good Muslims, but they have not any knowledge of its doctrines. The bride brings a dower, consisting of cattle, etc., proportioned in value according to the wealth of her family. She is brought home to the house of her betrothed husband, and then the ceremony is completed by dancing, drinking, and carousal. From the custom of the sons never migrating from the paternal spot, families, from one stock, increase from single sheds to considerable villages. Each habitation of these people is separated into three divisions,—one for the women, another for the men, and a third for the horses and other cattle. The whole little establishment is then encircled by a fence of wicker-work or stones.—*Porter's Travels*, i. p. 62.

TCHING-TCHEOU, a first-rate city of China, in which a kind of plain earthenware is prepared, which the Chinese prefer.

TCHING-TOU-FOU, the capital of the province of Sze-chuen, is one of the finest towns in China, in lat. 30° 40′ N., and long. 103° 44′ E. It is situated in the middle of an admirably fertile plain, watered by beautiful streams, and bounded towards the horizon by hills of graceful and varied forms. The principal streets are of a good width, paved entirely with large flagstones, and so clean that you can scarcely, as you pass through them, believe yourself to be in a Chinese town.—*Huc, Chinese Empire*, p. 79.

TCHUNG KWOCK. CHIN. The middle kingdom, a name the Chinese designate China proper.

TE. CHIN. God, an abbreviation of Shang-Te, the ancient name for God in China. It is used in place of the second personal pronoun, which could not be employed without breach of reverence.

TEA.

Chai, AR., KASH., PERS., RUS., TURK.	Thé, ... FR.
Ming, Ku-tu, Tu, . CHIN.	Thi, ... GER.
Ku-cha, Kia, Sheh, „	Cha, GUJ., HIND., PORT.
Chuen, Cha, . . „	Tsja, ... JAP.
Te, . . CHIN., DUT., IT., MALEAL., SP.	Black T.—Itam, MALAY.
	Green T.—Putch, . „
	Teh, Chah, . . . „

There is scarcely any country in the world in which a dietetic drink or beverage resembling tea is not prepared and in general use from some exotic or indigenous shrub.

The Mexico and Guatemala people infuse the leaves of the Psoralea glandulosa, Alstonia theæformis leaves are used at Matis, and the inhabitants of New Granada utilize the leaves of Symplocos alstonia, *Humboldt*, and likewise those of Gaultheria procumbens and Ledum latifolium. In Paraguay, under the name of Maté, the Ilex Paraguayensis is employed, as also its varieties, I. gongonha and I. theezans. In the Kurile Isles, the Pedicularis lanata. In British India, the stalks of the lemon grass, Andropogon citratus, are largely made use of. Also the 'tea of heaven' of the Japanese is the leaf of the Hydrangea Thunbergii, *Siebold*. Astoria theiformis is used at Santa Fe as tea. The leaves of Ceanothus Americanus, an astringent herb, have been a substitute, under the name of New Jersey tea.

The Kola is the Sterculia acuminata; the Kat'h or Catha, the Abyssinian tea plant, is the Catha edulis. Tasmanian tea is made from species of Melaleuca and Leptospermum, also from Correæa alba, Acœna sanguisorba, Glaphyra nitida, and the bark of Atherosperma moschata.

The Faham tea of Mauritius is from Angræcum fragrans, a fragrant orchid.

The two chief plants laid under contribution for tea are, however, the Chinese tea plant, and a species of holly peculiar to South America, producing the Paraguay tea.

The names by which the tea of the Thea Chinensis is known to the Chinese, viz. Ming, Ku-tu or Ku-cha, Kia, Tu, also show that several shrubs have furnished that country at various times with the tea-leaf in use at different periods or places. The term Ming belongs to the time of the T'ang dynasty, is still used in literary composition, and is often put on tea boxes. Ku-tu or Ku-cha are names for the chicory leaf, but also the present tea-leaf. The word Kia probably referred to the chicory, but also to the Sageretia theezans, a rhamnaceous shrub, the leaves of which at the present time furnish tea to the Chinese poor, to whom the proper tea-leaf is unattainable, owing to the high price to which the great exportation has raised it. Camellia leaves are perhaps mixed with it, but probably to no great extent. The refuse of packing houses is sold to the poor at a low rate. The name Tu is likewise still employed. During the reign of a prince of the Han dynasty, the use of the word 'tu' for the character 'cha' was interdicted, but the prohibition was evaded by omitting part of the Chinese character.

Thea Chinensis of Linnæus, the Camellia thea, *Linklater*, the C. theifera, *Griffith*, is, however, the plant which is to be noticed here.

Trade.—The immense traffic in the produce of this simple shrub affords one of the most remarkable illustrations of the enterprise and energy of modern commerce. Mr. Morrison, writing in 1843, says that the total exportation of tea from China was probably near 427,500 pikuls, or 57,000,000 lbs.; viz. to England, 40,000,000 lbs.; to the United States, 14,000,000 lbs.; and to all other countries, 3,000,000 lbs.; which, at 25 taels per pikul, amounts to a value of 10,687,500 taels, or 14,500,000 dollars. The increased facilities of communication, and with it the reduction of cost,

also the larger use of tea in lieu of alcoholic fluids, have so augmented the demand, that Great Britain alone, in 1882, imported about 211,080,362 lbs. Three-fourths of that quantity came from China, and about that quantity was retained for British home consumption, every person in the United Kingdom using, on an average, about 5 lbs. annually. Tea and coffee form the chief liquid food of whole nations, and must exercise a great influence upon the health of their people.

British India is now (1883) taking a large share in the commerce of this product. It imported in 1882-83, 2,751,085 lbs., value Rs. 19,30,515; and exported 57,766,235 lbs., value Rs. 3,69,95,085.

United Kingdom.

		1880.	1881.	1882.	1883.
Imported,	Lbs.	206,971,570	212,462,577	211,080,362	222,005,519
Value,	£	11,612,250	11,344,829	11,363,264	11,769,291
Home consumption,	Lbs.	158,570,334	160,225,789	165,079,881	170,812,697

British India—Official Year.

Imported,	Lbs	2,534,517	3,322,407	2,845,212	2,751,085
Value,	Rs	21,20,625	27,13,091	19,96,906	19,30,515
Exported and re exported,	Lbs.	38,174,521	46,413,510	48,691,725	57,766,235
Value,	Rs	3,05,10,200	3,05,42,400	3,60,91,364	3,69,95,085

The London market cannot easily absorb the quantity of tea that now reaches it from India and China. In 1871 the exports of tea from India to all ports were 13,250,000 lbs., valued at £1,139,703; in 1881 they were 38,400,000 lbs., valued at £3,072,244. The consumption of Indian tea has increased necessarily in the ten years; but during that time China has largely increased her export, and it is commonly said in London that, for the time being, the supply of tea of one sort or another is in excess of the world's demand. The export of tea from China is not increasing; and the proportion of really good to unquestionably inferior tea that she ships is steadily declining. China, in 1873, exported 39,299,000 H. taels, and in 1882, 31,332,000, a tael being 12 oz. avoir. India is strong in high-class teas, and her planters should spare no pains to maintain the repute of those teas in European, American, and colonial markets.

There is no information as to the quantities of teas retained for home consumption amongst all the millions using it in the countries in the S.E. of Asia. There is a large export trade of tea from China, through Si-ning-fu in Kan-su, with Muhammadan and other tribes, who bring horses in exchange. The Russians established in Hu-peh have taken out of Chinese hands the making of brick tea for the Mongols, Siberians, and Kirghiz

The prices of the teas of China greatly vary. The Russian teas, brought by caravans, are the most expensive and are the best used in Europe. The Chinese themselves pay 7½ dollars per lb. for the Yen Pouchong teas. Full chests were exhibited in 1851 by Mr. Ripley of various Pekoe teas, some of which sell at 50s. per lb. in the China market; whilst 7s. was the very highest price any of the sort fetched in England, and that only as a fancy article. The plain and orange-scented Pekoes bring little in Great Britain. All caravan teas are purchased by the wealthier Russian families. The finest, however, never leave China, being bought up by the mandarins; for though the transit expenses add 3s. to 4s. per lb. to the value when sold in Russia, the highest market price in St. Petersburg is always under 50s. Among the scented teas are various caper teas, flavoured with flowers and the buds of plants belonging to the orange tribe, Magnolia fuscata, Olea flowers, etc. The Cong Sou-choung or Ningyoung teas are chiefly purchased for the American market. Oolong tea was long the favourite drink in Calcutta, though less prized in England, its delicate flavour being injured by the length of the voyage. For delicacy, no teas approach those usually called 'Mandarin teas,' which, being slightly fired and rather damp when in the fittest state for use, will bear neither transport nor keeping. They are in great demand among the wealthy Chinese, and average 20s. per lb. in the native market. The dealers in China are very particular in the selection of high-sounding and felicitous titles for their several parcels, and often a particular parcel acquires such a name as to be eagerly sought after for each successive season.

In Great Britain there is so little demand for the high-priced teas, that in 1878 no tea in the market over 3s. per lb. found purchasers; in 1882 the best of the Indian teas were selling at 1s. 3d. per lb., and in 1883 prices were ranging from 6d. per lb. upwards.

In *Formosa*, tea is largely grown and exported to Foh-kien and Macao, where it is freely mixed with the Canton teas. Oolong tea is also produced in Formosa, and exported to the United States. Tea is grown in Cochin-China, but is considered inferior to that of China, being less strong and pleasant in flavour.

In *Japan*, 36,000,000 lbs. of tea were produced in 1871, the province of Suraga contributing 13,000,000 lbs. of that quantity.

What Indian tea is becoming to Chinese in Great Britain, Japanese tea is becoming to that of China in the United States. The loss to China in that quarter is even greater, for more than a third of the tea now consumed there comes from Japan.

Into *Java*, in 1828, the tea plant was introduced by the Dutch; and, so early as 1848, nearly 1,000,000 lbs. were exported to Holland. Mr. Jacobson, inspector of tea culture in Java, published a book upon the mode of cultivating this plant, upon the choice of ground, and the best processes for the preparation and manipulation of the leaves. On the mountain range which runs through the centre of the island, the tea gardens, extending from near the base high up the mountains, reach an atmosphere tempered by elevation.

In *Ceylon*, the cultivation of tea is become important. Begun about the year 1867, at which time about 10 acres were planted, it made small progress till 1875, when the acreage was estimated at 1080. Since then the increase has been more rapid, the area under tea at the close of 1880 being estimated at close upon 9300 acres. The exports for five years were—

1876,	757 lbs. Rs. 1,907	1879,	95,969 lbs. Rs. 85,229
1877,	2,105 ,, 3,457	1880,	139,752 ,, ...
1878,	19,607½ ,, 20,900		

This does not represent the whole annual outturn, there being a large local consumption.

In the Andaman Islands, tea cultivation promises success. On the 14 acres of tea which were under cultivation one season, the out-turn has been 411 lbs. to the acre for the twelve months.

History.—No mention of tea-drinking was made

by Marco Polo. Suliman, an Arabian merchant, who wrote an account of his travels in the east about the year A.D. 850, is quoted by Macpherson in his History of European Commerce with India, as stating that tea (sah) is the usual beverage of the Chinese; yet no other mention of the custom has been met with prior to the Jesuit missions to China and Japan, a little before the middle of the 16th century. Botero is quoted as speaking of it in 1590; Texeira, a Portuguese, about the year 1600, saw the dried leaves of tea at Malacca; and Olearius in 1638 found it in use among the Persians, who obtained the leaves from China through the medium of the Uzbak traders. Tea seems to have been first introduced into Europe by the Dutch East India Company, and to have found its way into London from Amsterdam. Tea, coffee, and chocolate are all mentioned together in an Act of Parliament of 1660, wherein a duty of 8d. is charged upon every gallon of chocolate, sherbet, and tea made for sale. How great a novelty it was is shown by Pepys' well-known entry, 25th September 1661:—'I sent for a cup of tea (a Chinese drink), of which I had never drank before.' It long continued to be imported in small quantities only, the East India Company having purchased in 1664, for presentation to the king, 2 lbs. 2 oz. of tea. In 1678 they imported 4713 lbs. of tea, it being then for the first time thought worth their attention as an article of trade.

In the six following years the entire imports amounted to no more than 410 lbs. According to Milburn's Oriental Commerce, the consumption in 1711 was 141,995 lbs.; 120,595 lbs. in 1715; and 237,904 lbs. in 1720. In 1745 the amount was 730,729 lbs. For above a century and a half, the sole object of the English East India Company's trade with China was to provide tea for consumption in the United Kingdom. The Company had the exclusive trade, and were bound to send orders for tea, and to provide ships to import the same, and always to have a year's consumption in their warehouses. The teas were disposed of in London, where only they could be imported, at quarterly sales. In 1740, 1,493,695 lbs. of tea were retained for home consumption. Two years afterwards, the quantity fell to 473,868 lbs., and in 1767 only 215,019 lbs. were retained. Next year the amount increased to 3,155,417 lbs.; in 1769 it was 9,114,854 lbs.; in 1790, 21,342,845 lbs; in 1836, 49,842,236 lbs.

An Act of Parliament in 1834 threw open the trade to China, and the imports into Britain of tea during the years 1838, 1852, and 1882 were as follows—

Years.	Black. lbs.	Green. lbs.	Total. lbs.	Home Consumption. lbs.
1838,	26,786,000	8,215,000	35,001,000	36,415,000
1852,	55,525,000	9,175,000	64,700,000	54,724,000
1882,	...	...	211,080,362	165,079,881

Varieties.—In European commerce, various kinds are known, as Black Tea, Bohea, Brick Tea, Congou, Green Tea, Gunpowder Tea, Imperial Gunpowder, Hyson, Pukli Hyson, Hyson Skin, Pekoe, Pekoe-Souchong, Flowery Pekoe, Scented Pekoe, Pouchong, and Souchong.

The Chinese names given to the various sorts of tea are derived for the most part from their appearance or place of growth, but the names of many of the best kinds are not commonly known abroad. *Bohea* is the name of the Wu-i Hills (or Bu-i, as the people on the spot call them), where the tea is grown, and is not a term for a particular sort among the Chinese, though it is applied to a very poor kind of black tea at Canton; *Sunglo*, likewise, is a general term for the green teas produced on the hills in Kiang-su. The names of the principal varieties of black tea are as follows:—*Pekoe* or *Pecco*, 'white hairs,' so called from the whitish down on the young leaves, is one of the choicest kinds, and has a peculiar taste; *Orange Pecco*, called shang-hiang, or 'most fragrant,' differs from it slightly; *Hungmuey*, 'red plum blossoms,' has a slightly reddish tinge; and the terms, prince's eyebrows, carnation hair, lotus kernel, sparrow's tongue, fir-leaf pattern, dragon's pellet, and dragon's whiskers, are all translations of the native names of different kinds of souchong or pecco. *Souchong* or *Sian-chung* means little plant or sort, as *Pouchong*, or folded sort, refers to the mode of packing it; *Campoi* is corrupted from kan-pei, *i.e.* carefully fired; *Chulan* is the tea scented with the chulan flower, and applied to some kinds of scented green tea. The names of green teas are less numerous:—*Gunpowder* or *Ma-chu*, *i.e.* hemp pearl, derives its name from the form into which the leaves are rolled; *Ta-chu*, or 'great pearl,' and *Chulan*, or 'pearl flower,' denote two kinds of imperial; *Hyson* or *Yu-tsien*, *i.e.* before the rains, originally denoted the tenderest leaves of the plant, and is now applied to the young hyson; as also another name, *Mei-pien*, or 'plum petals;' while *Hi-chun*, 'flourishing spring,' describes hyson; *Twankay*, or 'beacon-brook,' is the name of a stream in Che-kiang, where this sort is produced; and *Hyson skin* or *Pi-cha*, *i.e.* skin tea, is the poorest kind, the siftings of the other varieties; *Oolung*, 'black dragon,' is a kind of black tea with green flavour. Ankoi teas are produced in the district of Nganki, not far from Tsinen-chan-fu, possessing a peculiar taste, supposed to be owing to the ferruginous nature of the soil. De Guignes speaks of the *Pu-'rh* tea, from the place in Kiang-su where it grows, and says it is cured from wild plants found there; the infusion is unpleasant, and used for medical purposes. *Congo* is a corruption of *Kung-fu*, signifying labour; and the *Moning Congo* is so called from being grown in the district named from the city of Wuning, meaning Military Rest. Chulan tea, mentioned above, is brought from Foh-kien; it is scented with the Aglaia flowers, and answers to the scented caper of foreign markets. In the tea shops of China, Lung-ching, Tsioh-sheh, and Yai-chai are names of good teas in high repute.

Culture.—The tea plant is multiplied by seed like the hawthorn, and therefore the produce cannot be identical in every respect with the parent. Instead, therefore, of having one or two botanical varieties of tea plant in China, there are in fact many kinds, although the difference between them may be slight. The seeds of this plant are gathered year after year in different climates, and in the course of time the plants in one district slightly differ from those of another, although they may have been originally produced from the same stock. But the plants of Canton, Hwuy-chow, and Wu-i are the same species, and the slight differences observed are the results of reproduction and difference of climate.

These differences, however, do not alter the

commercial value of the plants found cultivated in the great tea countries of Foh-kien and Hwuy-chow, where the finest teas are produced. While the tea shrub may have improved in the course of reproduction in these districts, it may have become deteriorated in others. For this reason, seeds and plants for forming fresh plantations ought always to be procured from the districts famed for the excellence of its produce.

Sir John Davis, Mr. Fortune, and Archdeacon Gray have given detailed accounts of the Chinese modes of its cultivation and manufacture.

The last-named author mentions that in China the seed is gathered in October, and perfectly dried in the sun. In February or beginning of March, the seeds are soaked for 24 hours in cold water, and are then deposited in cloth bags in a moderately warm chamber, usually the cook room. When partially dried, they are moistened with water, after which they are again partially dried, and then once more moistened; and this process is continued until they begin to sprout, when they are placed half an inch apart in thin layers of earth, spread over basket-work or matting. During the first four days, every morning they are well watered and exposed to the sun, and in the evening are sheltered in-doors. On the fifth day they are strong enough to be exposed at night, and when 4 inches high they are planted in the ground, each 2 feet apart. Hilly ground, as affording good drainage, which is of vast importance, is better adapted for the growth of the plant than flat ground.

The tea plant yields its first crop at the end of the third year. If stripped before this, it may be spoiled or seriously injured. After this age, if the annual stripping be omitted, the following year would be marked by a very poor and comparatively useless crop. There are three gatherings yearly. The first crop of leaves is gathered in the latter part of April, the second towards the end of May or in the early part of June, and the third about 30 days afterwards. Great pains are taken not to exhaust the plants by plucking them too bare. Despite every care, when 8 or 10 years old, they become unproductive, yielding only a few coarse leaves; and farmers cut the shrubs down to the stems to obtain new shoots and leaves in succeeding summers.

Before commencing their labours, the gatherers have to wash their hands, and they deposit the leaves which they pluck in clean wicker-work baskets. An expert labourer can, with comparative ease, gather from 10 to 13 lbs. of leaves in a day. The leaves are plucked with great nicety, not more than one being plucked from the stalk at a time.

Manufacture. — In making *Congou*, the leaves are spread out in the open air to dry. They are then for 2 or 3 hours trodden by labourers to press out any moisture remaining in them, and are again heaped together and covered with cloths, and allowed to remain for one night, during which they generate a heat which changes their green to black or brown, become more fragrant, and undergo a decided change in flavour. The labourers now rub the leaves between the palms of their hands, so as to twist or crumple them, and in this state they are dried in the sun, or, if rainy, baked over a slow charcoal fire. In this state they are sold to the proprietors of the tea hongs, who again give them a two hours' firing, and the bad leaves and stems are then picked out, the whole winnowed, and packed in boxes lined with paper. The colour of the leaves gives their special names of black leaf, red or brown leaf congou, Oonan congou, Ning-chow congou, and Ho-chow congou. Oo-pak congou comprises the numerous kinds of congou produced in the province of Hu-peh, and largely exported from the port of Hankow. Oonan congou is produced in the province of Ho-nan; the leaves have a greyish-blackish colour, and in some instances a tinge of red.

Ning-chow congou is produced in the N.W. of the province of Kiang-si, and its finest varieties at Wu-ning, a place S.W. of the city of Kiu-kiang, where, as also at Canton and Hankow, it is chiefly sold. Its leaves are of a brownish-black colour. Ho-how congou is produced in the N.E. parts of the province of Kiang-si, and on the north of the Bohea Hills. The Ho-how teas are almost all sent to Kiu-kiang for sale, small quantities to Shanghai, Canton, and Fu-chu. The Ho-how teas rank lowest of all; the finest Oo-pak teas consist of the best black-leaf teas. Fine Oonan teas are superior to those of Ning-chow.

Foh-kien yields the small and closely-twisted red and brown leaf congous, but the finest of this kind, called Kai-shan, come from a district near the town of Shama. The principal market for these teas is Fu-chu, but those produced in the southern part of the province of Foh-kien are sent to Amoy.

The best congou of the Kwang-tung province is called Tay-shan congou. The leaves are long and wiry, and of a brownish-black hue. Much of it is sold at Macao.

In recent years a good imitation of red-leaf congou, small and twisted leaves, has been made at Canton and exported to Great Britain, to which also the red-leaf sorts are sent, and in smaller quantities to the United States, packed in chests or half-chests of from 40 to 60 lbs. Tay-shan congous are packed in boxes from 20 to 30 lbs., and black-leaf congous in chests containing 85 to 110 lbs.

Souchong tea has the same reddish or brownish colours as the red-leaf congou. Souchong is a class of tea very similar to congou. Fine souchong is produced only in the N.E. part of the province of Foh-kien. The picked leaves are spread out in the open air to dry, then trodden by labourers, and piled for one night in large heaps, each of which is covered carefully with a cloth. Next morning every particle of it is carefully rubbed between the hands, and for three hours dried over charcoal fires. The method of making souchong is similar in all respects to that of making congou. The first crop of souchong is only fired once, but is afterwards exposed to the sun's rays.

Flowery Pekoe, a fancy tea, is little made. It is prepared from leaf-buds which are exposed to the sun to dry as soon as they are gathered and then sold to the wholesale proprietors of hongs, who finally fire the leaves over a slow fire, and then pack them. The leaves have a downy appearance, and vary in colour, some being yellow, some black. It is exported from Fu-chu, and a little from Canton, to England.

Oo-long tea is produced in the province of Foh-kien. It is of some importance in trade, and is exported from the Fu-chu and Amoy ports largely

to the United States and to England and Australia. In preparing it, the leaves when gathered are spread out to dry; they are then sprinkled or moistened with water, and eventually fired in the same manner as congou. The planters then sell them to the tea hongs, whose workmen pick out all the stems and bad leaves. After this, the leaves are again moistened with water and once more fired. When leaves have been collected sufficient to form a chop, they are all mixed together and once again fired. In appearance they are yellow, with a black or dirt-green tint; in form they are bold, irregular, somewhat wiry, and not closely twisted.

Scented Orange Pekoe is made in the provinces of Quang-tong and Foh-kien. Those manufactured in the Quang-tong province are called Canton scented orange pekoe; those from Foh-kien are Fu-chu scented orange pekoe. In their manufacture, the leaves are spread out in the open air to dry; labourers then rub them between the palms of their hands to impart a twisted or crumpled appearance to them, and they are sent in that stage of manufacture to the markets of Canton and Fu-chu, where they are immediately unpacked and baked over a slow fire, and mixed with the flowers of the Arabian jasmine. When they are supposed to have sufficiently imbibed the fragrance, they are separated from the jasmine flowers by means of sieves. Fine kinds of scented orange pekoe are twice scented. They are not fired a second time. The leaves of the Fu-chu scented orange pekoe are small and closely twisted, of a yellow colour, with a brownish or blackish tinge. The Canton scented orange pekoe is long, wiry, closely twisted, and black, with occasionally a yellowish or greenish tinge. The black colour is produced by a mixture of powdered charcoal. Scented orange pekoe is invariably packed in boxes, and is exported to Great Britain; a small quantity from Fu-chu to Australia.

Scented Caper is made in the same manner as the scented orange pekoe. It consists, in fact, of pellet-shaped leaves, separated by a sifting process from the leaves of scented orange pekoe. Those prepared at Fu-chu are yellowish and brownish or blackish, whereas those manufactured at Canton are black or brown, with an occasional tinge of yellow or green. The tea made into caper at Canton is grown upon an extensive range of hills in the district of Hok-shan, one of the counties forming the prefecture of Kwang Chu-fu. After being there well dried and fired, the leaves are forwarded to Canton, where they are made into caper by the following process:—17 or 18 handfuls are placed in each of the pans with which the tea hong is furnished, are moistened with water, and well stirred up by hand. Rendered thus soft and pliable, they are immediately put into small coarse sackcloth bags, each of which, when filled and tightly closed, has the appearance of a football. These bags are all arranged on the floor of one of the largest chambers of the hong, and are moved to and fro by labourers who stand upon them, and who, in order to roll them backwards and forwards with their feet without the risk of falling, support themselves by grasping long wooden poles. Under this process, the tea leaves in each bag assume the form of pellets or capers.

The coarser leaves are gathered from the finer caper, are well fired, put into wooden troughs, and cut into several pieces by means of choppers, not unlike in shape to large spuds, and by the same process are made into a tea, which is also called caper.

A very inferior kind of scented caper is made by mixing tea-dust with congee water and sifting it, giving it the form of pellets. Scented caper is exported to Great Britain.

Green tea is prepared as follows:—The leaves, as soon as they are plucked, are placed in iron pans over a charcoal fire for 2 or 3 minutes; they are then rubbed together for a short time, after which they are again fired for 2 or 3 hours, all the time being constantly stirred. With the fine tea, the leaves are constantly fanned during the first hour of the second firing, so as to preserve their green colour. After this process, they are packed and sold to the tea hongs, where they are a third time exposed for half an hour to the action of fire, and are then cleaned by the usual sieving, picking, and winnowing.

In manipulating green teas, much care and attention must be given to the separation of leaves which differ in size and shape. When separated, the leaves are sold to the foreign merchants. The small pellet-shaped tea are termed Gunpowder, and the larger-sized pellets are called Imperial; small-sized leaves which are wiry and twisted are called Young Hyson, whilst those of a larger size are called Hyson. Twan-kay is a term applied to leaves which are light, large, coarse, and irregular; and those that are skinny and broken are called Skin or Hyson Skin, also Hyson Twan-kay.

When these leaves have been separated and classed under their respective names, they are again fired — Gunpowder for 12 or 14 hours; imperial for 8 hours; young hyson for 10 hours; hyson for 8 hours; and twan-kay and skin for 3 hours. When each of these kinds is half-fired, small quantities of gypsum powder, Prussian blue, and turmeric are mixed with them to give them the desired tint. All green teas, whether fine or common, are mixed with these named ingredients, in such quantities as the tea-men desire. When the different kinds of green tea leaves have undergone the action of fire, they are well stirred up and fired once more for half an hour. Green tea is generally packed in half-chests, occasionally in boxes. The finest description is made in the neighbourhood of Wuyune, and is known by the name of Moyune. All green teas are forwarded for exportation to Shanghai, Kiu-kiang, and Ningpo.

Scenting.—Flowers of various plants are used in scenting by the Chinese, some of which are considered better than others, and some can be had at seasons when others are not procurable. Mr. Fortune prepared the following list with great care. The numbers prefixed express the relative value of each kind in the eyes of the Chinese, and the asterisks point out those which are mostly used for scenting teas for the foreign markets in the order in which they are valued. Thus the Mo-le and the Sieu-hing are considered the best, and so on:—

1 Rose-scented (Tsing moi-qui-hwa).
1, 2 Plum double (Moi-hwa).
2 *Jasminum sambac (Mo-le-hwa).
2, 3 *Jasminum paniculatum (Sieu-hing-hwa).
4 *Aglaia odorata (Lan-hwa or You-chu-lan).
5 Olea fragrans (Kwei-hwa).
6 *Orange (Chang-hwa).
7 *Gardenia florida (Paksema-hwa).

It has been frequently stated that the Chloranthus is largely used. This appears to be a mistake, originating, no doubt, in the similarity of its Chinese name to that of Aglaia odorata. The Chloranthus is called Chu-lan, the Aglaia Lan or Yu-chu-lan. The different flowers are not all used in the same proportion. Thus of orange flowers there are 40 to 100 lbs. of tea; of Aglaia there are 100 to 150 lbs.; and of Jasminum sambac there are 50 to 100 lbs. The flowers of the Sieu-hing (Jasminum paniculatum) are generally mixed with those of the Mo-le (Jasminum sambac) in the proportion of 10 lbs. of the former to 30 lbs. of the latter, and the 40 lbs. thus produced are sufficient for 100 lbs. of tea. The Kwei-hwa (Olea fragrans) is used chiefly in the northern districts as a scent for a rare and expensive kind of hyson pekoe,—a tea which forms a most delicious and refreshing beverage when taken à la Chinoise, without sugar and milk. The quantity of flowers used seemed to Mr. Fortune to be very large; and he made particular inquiries as to whether the teas that are scented were mixed up with large quantities of unscented kinds. The Chinese unhesitatingly affirmed that such was not the case, but notwithstanding their assertions he had doubts on this point. The length of time which teas thus scented retain the scent, is most remarkable. It varies, however, with the different sorts. Thus the Olea fragrans tea will only keep well for one year; at the end of two years it has either become scentless, or has a peculiar oily odour which is disagreeable. Teas scented with orange blossoms and with those of the Mo-le will keep well for two or three years, and the Sieu-hing kinds for three or four years. The Aglaia retains the scent longer than any, and is said to preserve well for five or six years. The tea scented with the Sieu-hing is said to be most esteemed by foreigners, although it is put down as second or third rate by the Chinese. Scented teas for the foreign market are nearly all made in Canton, and are known to merchants by the names of Scented Orange, Pekoe, and Scented Caper. The flowers are grown in and near a place called Tashan, in the Canton province.

Mr. Fortune thus describes the scenting process. In a corner of the building there lay a large heap of orange flowers, which filled the air with the most delicious perfume. A man was engaged in sifting them to get out the stamens and other smaller portions of the flower. This process was necessary, in order that the flowers might be readily sifted out of the tea after the scenting had been accomplished. The orange flowers being fully expanded, the large petals were easily separated from the stamens and smaller ones. In 100 parts 70 per cent. were used, and 30 thrown away. When the orange is used, its flowers must be fully expanded, in order to bring out the scent; but flowers of jasmine may be used in the bud, as they will expand and emit their fragrance during the time they are mixed with the tea. When the flowers had been sifted over in the manner described, they were ready for use. In the meantime the tea to be scented had been carefully manipulated, and appeared perfectly dried and finished. At this stage of the process it is worthy of observing that, while the tea perfectly dry, the orange flowers were just as they had been gathered from the trees. Large quantities of the tea were now mixed up with the flowers, in the proportion of 40 lbs. of flowers to 100 lbs. of tea. This dry tea and the undried flowers were allowed to lie mixed together for the space of twenty-four hours. At the end of this time the flowers were sifted out of the tea, and by the repeated sifting and winnowing processes which the tea had afterwards to undergo, they were nearly all got rid of. Sometimes a few stray ones are left in the tea, and may be detected even after it arrives in England. A small portion of tea adheres to the moist flowers when they are sifted out, and this is generally given away to the poor, who pick it out with the hand. The flowers, at this part of the process, had impregnated the tea leaves with a large portion of their peculiar odour, but they had also left behind them a certain portion of moisture which it was necessary to expel. This was done by placing the tea once more over slow charcoal fires in basket sieves prepared for the purpose of drying. The scent communicated by the flowers is very light for some time, but, like the fragrance peculiar to the tea leaf itself, comes out after being packed for a week or two. Sometimes this scenting process is repeated when the odour is not considered sufficiently strong; and the headman in the factory said that he sometimes scented twice with orange flowers and once with the Mo-le (Jasminum sambac).

In *British India*, tea growing and its manufacture into the commercial product have become great industries. The name in ordinary use, alike for the plant and its products, is Cha. In Cachar the tea tree is called Dullicham, meaning white wood, from the light colour of its bark. It is called Phlap also Khlap by the Assamese, but also Misa Phlap in Muttack, and Heelkat in other parts of Assam. Chinese tradition points to India as the original home of the tea plant. 'A Brahman ascetic named Dharma went as a missionary to China. Wearied with a toilsome journey, he fell fast asleep on reaching his destination, and on awaking, angry at such weakness, he tore out his eyebrows. The hairs, taking root, became tea plants, the leaves of which he tasted, and he was soothed into mystic meditation.' Colonel Kyd in 1780 formed a tea-garden in Calcutta with plants from Canton, the nucleus of the Calcutta Botanic Garden.

It was not known to Europeans to be indigenous in British India till the early part of the 19th century. At the request of the E. I. Company, on the suggestion of Warren Hastings, Sir Joseph Banks in 1788 had drawn up a memorandum recommending the introduction of plants from China, and suggesting Behar, Rungpur, and Koch-Bahar as suitable regions.

But it was only in 1815 that a Bengal Lieut.-Colonel brought to notice the presence of the plant in the N.E. of British India. From that date the notices became frequent. Dr. Buchanan Hamilton early mentioned it as a plant of Assam and the Burmese territories there. In 1816 the Honourable Mr. Gardner found it in the Nepalese dominions; Moorcroft in Bussahir in 1821; Bishop Heber in Kamaon in 1824; brothers Bruce in 1826; and Dr. Corbyn in 1827. But the really practical discovery was made in 1819 by Mr. David Scott, Commissioner of Assam, who sent from Munnipur to Mr. G. Swinton, then Chief Secretary to the

India Government, a specimen of the leaves of a shrub which he insisted was a real tea. The very specimen is still preserved in the Linnæan Society of London. It has been said that they were brought to his notice by the two brothers Major R. and Mr. C. A. Bruce. The latter, the younger, had been trading in Assam previous to its annexation, and subsequently, in 1826, being in command of a division of gunboats in Upper Assam, he brought down with him some shrubs and seed, which were at once identified as belonging to the tea plant of commerce, and he subsequently, in 1833, brought it to the notice of Capt. Jenkins.

The tea had been found by Mr. Bruce on the Naga Hills; but in his latest account, published in August 1839 in the Journal of the Asiatic Society, he gives an account of the discovery of 120 tea tracts, some of them very extensive, both on the hills and in the plains.

In 1834, Lord William Bentinck, Governor-General, urged upon the Court of Directors the importance of cultivating the plant, and a committee, consisting of eleven European and two native gentlemen, was appointed to mature and carry out a plan for introducing the plant into such districts of India as seemed best suited to its culture. As it had been found in a wild state in Assam, the committee proceeded thither, established nurseries, and organized a sort of exploring service under Mr. C. A. Bruce.

Chinese seed and young plants were also introduced, and were found to thrive well. At first, progress was very slow and unsatisfactory. A sample of the produce of the new gardens was sent to the Directors in 1836, but it arrived in such a mouldy condition, that it could not be tested. It is said that this specimen merely consisted of green leaves, and that no attempt had been made to render it commercially valuable. Those in charge of the plantations knew nothing whatever of the process of manufacture, and in 1837 it was necessary to introduce Chinese tea-makers and artisans. Under their superintendence, consignments of Assam tea were forwarded to the Court of Directors in the years 1838-39, and were found, on arrival, to be of excellent quality, and commanded very high prices in the open market. So good was it that it at once attracted the attention of speculators, and a company, which was afterwards styled the Assam Company, was formed for the cultivation of the tea plant and the manufacture of tea in Upper Assam. Having thus seen the industry adopted by the commercial world, the Indian Government withdrew in favour of private enterprise, and handed over two-thirds of its establishment, gardens, and nurseries to the company. The remaining third was retained for a few years longer, and was subsequently disposed of (1849) to a Chinaman for 900 rupees.

But in 1850 the E. I. Company despatched Mr. Fortune to China to glean all possible information regarding the tea plant and the manipulation of its leaves, and to bring plants and seed of the best varieties, as also some experienced cultivators and work-people.

From 1863 to 1865, Calcutta went fairly mad about tea; speculators set to work at the purchase of enormous tracts of land in Assam and elsewhere, which were subsequently disposed of to limited liability companies at enormous profits. Eventually the bubble burst, and for a time the very name of tea cultivation fell into unmeasured odium. From 1866 to 1868, estates on which many lakhs of rupees had been expended, were sold for a few hundreds. Some shrewd capitalists, however, bought up the more conveniently situated plantations, and quietly developed their productive capacities. The rehabilitation of the Indian tea industry fairly commenced in 1869, and has continued to make rapid progress ever since.

The *India tea plant* flourishes from the confines of Afghanistan to the borders of Burma, from the 25th to the 33d degree of latitude, and from the 70th to the 95th degree of longitude. Tea grows on the Himalayas at an elevation of 7000 feet above the level of the sea, in the valley of the Doon, at the base of the Himalayas, an elevation of 2000 feet, on the banks of the Brahmaputra in Assam, and the Surma in Sylhet, at a very small elevation above the level of the sea. On hill or plain, from 1000 to 8000 feet above the level of the sea, the tea plant thrives well, and the only condition that it appears to require is a light and porous soil. Over this vast area, wherever tea has been planted, it has more than answered the expectations of growers. It is now cultivated to a great extent in Assam, Dacca, Koch-Bahar, Chittagong, Chutia Nagpur, Darjeeling, Terai, Kangra, Garhwal, Kamaon, Cachar, Sylhet, Dehra, Hazaribagh, to a considerable extent on the Neilgherry Hills, with smaller plantations on the Shevaroys.

Tea cultivation was undertaken on the Neilgherries about 1863, and although not much had been done there, it was clearly established that tea would grow, the plants attaining a large size, and yielding very fairly. Just when the matter was being taken up, coffee was introduced, for which the climate was found very favourable, and it practically superseded tea.

In 1872, the tea produced in the small gardens in the Neilgherry Hills amounted to only 80,000 lbs., and four distinct methods of manufacturing it were in vogue. In the following year, the quality of the Neilgherry tea had so much improved that its price ranged from 2s. 4d. to 3s. per lb. and upwards. There can be no doubt that these hills are well adapted for the growth of tea. Though better tea is turned out at higher elevations, larger quantities are obtained lower down, and Kotagherry, Kodanaad, Cunur, and the numerous ravines having any aspect but a S.W. one, will be found the most suitable localities for the formation of tea plantations. Forest land, if possible, should be secured; the less precipitous it is the better. And as drought is not unusual at certain seasons, care should be taken to provide for water being led to any part of the site selected.

Plants supplied by Government through Dr. Wallich were planted in the Shevaroy Hills about the year 1844, and had thriven well.

Culture.—Neilgherry and Shevaroy tea seed is very liable to rot before it germinates. The best way to prevent this is to crack the shell of the tea seed, place it immediately in a loose, rather open soil in shallow large flower-pots, apply steam below these pots for an hour every day, and about the fifth day the seed will begin to sprout. It is better to propagate tea in this way than to sow the seeds out, as many of them lie for months without

striking. In six weeks or two months the young trees may be transplanted.

In the year 1877-78, there were in British India 180,130 acres of mature plants under cultivation, in 2103 tea plantations. Of these plantations, 786 were in Assam, 221 in Bengal, 1041 in Kangra in the Panjab, and 53 on the Neilgherries, and the yield was estimated approximately at 36,143,045 lbs., the average yield in lbs. per acre of mature plants ranging in the several provinces from 101 to 395 lbs.

The tea plantations in the N.W. Provinces in 1881 were 90 in number, of 8562 acres.

In the Panjab, almost all in Kangra, there were 1422 plantations of 7466 acres, mostly small plots, owned chiefly by natives.

The joint-stock share market quotations of 14th February 1884 gave the present values of 86 tea companies, showing five at par, 16 at a premium. But the £20 share of the original Assam Company was selling for Rs. 550-560.

Age.—The tea plant does not yield leaves fit for the manufacture of tea until the third year; it increases yearly its produce until the eighth or tenth year, at which time it attains its maximum. From a series of experiments made in the hills and the Dehra Doon, full-grown plants yield tea in the proportion of 20 lbs. to the 100 plants. An acre of land contains from 1500 to 1600 plants; the yield of tea would therefore be from 300 to 320 lbs.

Manufacture. — In China, manual labour is alone employed in the processes of manufacture, from the green leaf to the commercial article. In India, machinery for preparing the leaves has been invented by Europeans. Mr. Joachimi suggested one to be moved with steam, and in 1866 three machines for dressing tea leaves were patented in England. A well-appointed Indian factory has a steam-engine of perhaps 20 horse-power, working rollers, driers, equalizers, sifters, etc., and the work is done more regularly, better, in a more cleanly way than by hand.

Testing.—Teas are repeatedly tested during the stages of manufacture, by pouring boiling water on a few leaves, to observe the colour, aroma, taste, strength, and other properties of the infusion. As many as fifteen drawings can be made from the best leaves before the infusion runs off limpid. In selecting all kinds of tea, the colour, clearness, taste, and strength of the infusion are the principal criteria; the weight of the parcels, taste and colour of the dry leaf, and its smell when strongly breathed upon, are also noticed.

In China, the infusion is sold in public houses in every town, and along public roads and the banks of rivers and canals; nor is it unusual for the burdened and weary traveller to lay down his load, refresh himself with a cup of warm tea, and then pursue his journey. The wealthy Chinese simply infuse the leaves in an elegant porcelain cup, which has a cover of the same material; the leaves sink to the bottom of the cup, and generally remain there without inconvenience, though occasionally some may float or rise to the surface. To prevent this inconvenience, sometimes a thin piece of silver filigree is placed immediately on them. Where economy is necessary to be studied, the teapot is used. Chinese use the best they can afford, generally the young leaves from old trees; they put a few leaves into a cup and pour on them water a little short of the boiling point, and drink hot.

Raw tea leaves, just as they are plucked from the bushes, and unmanufactured, are exposed for sale in the markets of China. They are sold at from three farthings to five farthings a pound; and as it takes about 4 pounds of raw leaves to make 1 pound of tea, it follows that the price paid is at the rate of 3d. to 5d. a pound; but to this must be added the expense of manipulation. In this manner the inhabitants of large towns in China, who have no tea farms of their own, can buy the raw leaves in the market, and manufacture the beverage for themselves and in their own way.

The tea of Mongolia is prepared by simply firing the leaves, so soon as plucked, seven or eight times in an iron pan.

The wealthy Japanese continue the ancient mode of grinding the leaves to powder; and, after infusion in a cup, it is whipped with a split bamboo or denticulated instrument till it creams, when they drink both the infusion and powder, as coffee is used in many parts of Asia.

Analysis of Tea.—The infusion made from tea contains gum, glucose or saccharine matter, a large quantity of tannin, and a peculiar nitrogenized principle called theine; this is identical with caffeine, and upon its presence many of the properties of tea depend. The amount of gum and tannin contained in a given sample of tea afford data by which its quality may to some extent be determined. Tea by many is looked on more as a luxury than of use to the human system; but Liebig, without entering minutely into the medical action of caffeine, theine, etc., says it will surely appear a most striking fact, even if we were to deny its influence on the process of secretion, that the substance, with the addition of oxygen and the elements of water, can yield taurine, the nitrogenized compound peculiar to bile.

Properties of Tea.—Lo Yu, a learned Chinese, who lived in the dynasty of Tang, A.D. 618 to 906, gives the following account of the qualities and effects of the infusion of the leaves of the tea plant: —'It tempers the spirit and harmonizes the mind; dispels lassitude and relieves fatigue; awakens thought and prevents drowsiness; lightens or refreshes the body and clears the perceptive faculties.' In Pereira's Materia Medica, we find the following remarks relating to the properties of tea:—'Its astringency is proved by its chemical properties. Another quality possessed especially by green tea, is that of diminishing the tendency to sleep. Tea appears to possess a sedative influence with regard to the vascular system. Strong green tea taken in large quantities, is capable, in some constitutions, of producing a most distressing feeling, and of operating as a narcotic.'

Brick tea in Hankow is made of two sizes. The large green brick tea is made by the Russian factors at Hawning, and at Tsung-yang in Hu-peh, and is sent through the Kalgan gate of the Great Wall. The small brick tea is much finer than the large, and the black brick tea is made in the same moulds. These teas go to the Siberians, the Buriat, the Tungus, and Kirghiz tribes, as well as the Mongols. The bricks are in a convenient form for barter. They are by no means an in-

ferior tea, and it is actually eaten, the leaves being chopped up with salt and butter or koumiss. The finer sorts are friable masses, and are packed in papers; the coarser are sewn up in sheepskin. In this form it is an article of commerce throughout Central and Northern Asia and the Himalayan provinces; and is consumed by Mongols, Tartars, and Tibetans, churned with milk, salt, butter, and boiling water, more as a soup than as tea proper. Certain quantities are forced upon the acceptance of the western tributaries of the Chinese empire in payment for the support of troops, etc.; and is hence, from its convenient size and form, brought into circulation as a currency over an area greater than that of Europe.

Green brick tea is made at Tung-shan in Ho-nan province from leaves which have fallen to the ground. These are put into wicker baskets, which are placed over slow fires, in iron pans filled to the brim with water, which is kept boiling, and the ascending steam permeates the mixed leaves in the basket. The contents are then placed in moulds, and eventually pressed with heavy weights. The process takes a month. Black brick tea is prepared in the same manner in three weeks. It is made at Sung-yang and Yang-lou-tung in Hu-peh province. —*Jameson's Ed. Jo.*, 1825, p. 378; *Baron F. Von Mueller, Select Plants; Ball, Cultivation and Manufacture of Tea; Dr. Cooke, Food; Sir John Davis, China; Fortune, Tea Districts; Fortune, Wanderings in China; Williams' Middle Kingdom; Bonynge's America; Cat. Exh.*, 1862; *Smith, Mat. Med. China; Archdeacon Gray, China*, ii. pp. 204-214; *L. Lyod and Cheshire's Market Reports; Ewart Macaughy and Co.'s Circulars; Wade*, pp. 141, 142; *Universal Review; Hassall's Food and its Adulterations; M'Culloch's Commercial Dictionary; London Market Reviews and Commercial Circulars; Prize Essays on Tea Cultivation, published in the Journal of the Agri-Horticultural Society of India*, iii. part 2, 1872; *J. F. W. Watson on the Cultivation and Manufacture of Tea; The Tea Cyclopædia—Articles on Tea Statistics, compiled by the Editor of the Indian Tea Gazette, and Blights from Drawings by S. E. Peal*, 1882; *The Tea Industry in India, by Samuel Baildon, author of Tea in India*, 1882.

TEA-HEIH-TU-SHWO. Chow-tsze was the originator of the second epoch of philosophical development in China. To him is ascribed the merit of having revived that distinct knowledge of the greatest truths which had been lost to the world for the thirteen centuries that had elapsed after the death of Mencius (Meng-tse). And he regained that knowledge by the independent efforts of his own mind, unaided by any master. Only two of his works have been preserved, the Tea-heih-tu-shwo and the Tungshat. He died in A.D. 1200; and in A.D. 1241 an imperial rescript ordered his tablet, with those of four of his immediate predecessors, whose works he had annotated, to be placed in the temples of Confucius, which are to be found in every district city throughout the empire. From that time to this, a period of six hundred years, his views of philosophy, morality, and politics have been supreme in China. At this day, his commentaries on the Yih King and the Four Books are learned by heart by millions of Chinese, with the text of these works. The Public Service Examinations cannot be passed unless this be done.

TEAK, Tectona grandis.

Sagwan, . . .	HIND.	Tek maram, . . .	TAM.
Jati, ...	MALAY.	Teku chettu, . .	TEL.

The teak tree grows in the southern and western parts of the Peninsula of India, in Malabar, in Canara, in the Wynad, in the forests of the Animallay Hills, also in Burma, N. Siam, Sumatra, Java, Celebes, Sumbawa, Leo, and the Shan States. Between Japara and Sourabaya several extensive teak forests occur. But Java is the only island in the Archipelago possessing teak forests which are available to any extent for the purpose of ship-building. In Sumatra, Celebes, and Sumbawa, the forests are so far distant from the sea, that the expense of land carriage prevents the natives from deriving any great advantage from its use. Teak is not known to inhabit the Malayan Peninsula. The teak forests in Pegu and Amherst, also those of the Wynad and Godavery, are extensive. The tree grows to a great size, attaining maturity in about eighty years, and is the best wood in India for ship timber, house-carpentry, or any other work where strong and durable wood is required.

Godavery teak varies much in density; much of it is finely veined; generally it is heavier than the Rangoon teak, but not equal to some from the Malabar coast.

Upon the whole, the Malabar teak seems the best. That of Rangoon is lighter and more open in the grain, and is preferred for masts and spars. The dark or heavy teak of the mountains bordering on the Godavery is very little if at all inferior to the Malabar, but a good deal of the Godavery teak is very open-grained.

The sap-wood is white and small; the heart-wood, when cut green, has a pleasant and strong aromatic fragrance and a beautiful dark golden-yellow colour, which on seasoning soon darkens into brown, mottled with darker streaks. It is moderately hard, exceedingly durable and strong, does not split, crack, warp, shrink, or alter its shape; when once seasoned works easily, and takes a good polish. A cubic foot, when seasoned, averages 42 lbs. It does not suffer if in contact with iron, and is rarely if ever attacked with white ants. It is used for house and ship building, for bridges, sleepers, furniture, and is also exported from India—

	Cubic Tons.	Value Rs.		Cubic Tons.	Value Rs.
1874-75,	42,868	32,85,640	1879-80,	38,420	28,19,590
1875-76,	60,612	44,06,182	1880-81,	65,626	50,00,406
1877-78,	56,939	40,66,524	1882-83,	59,187	61,12,597

Linseed oil applied to teak brings out the veins of the wood very beautifully. For ship-building purposes, teak is superior to every other sort of wood, being light, strong, durable, whether in or out of water. The ships of war built of this timber were—

Ships of the Line.—Minden, Cornwallis, Melville, Malabar, Wellesley, Ganges, Asia, Bombay, Calcutta, Hastings.

Frigates.—Salsette, Amphitrite, Trincomalee, Seringapatam, Madagascar, Andromeda, Alligator, Samarang, Herald.

Sloops.—Victor, Chameleon, Sphynx, Cochin.

Teak wood is used as a rib-lining of the arches in the caves of Karli, and is said to be coeval with their formation, about two thousand years

ago. Pliny states that the beams in the temple of Apollo at Utica were in perfect preservation in his time, though they had then endured 1178 years. The teak furnishes an opaque, dull ash-coloured oil, which separates into two layers, an upper or dark-coloured clear stratum, and a lower and more solid deposit. Its chief use is for applying to wood-work of all sorts, either alone as a natural varnish, or in combination with certain resins.

A concretion of lime or gypsum is occasionally found in the shake of the teak.—*M. Ex. J. R. Records; Govt. of India F. D. Conservators' Reports; Mr. Earl; Mr. Gamble.*

TEAL.

Tulsia bigri, . . .	Beng.	Cercedula, Cercevolo,	It.
Krik-and, ...	Dan.	Sartella, Scavolo, .	,,
Winter taling, . .	Dut.	Anitrella, ...	,,
Sarcelle, Cercelle, .	Fr.	Anitra d'Inverno, .	,,
Cercerelle, Aldebrande,	,,	Kestel-ort-and, . .	Nor.
Garsote, Halebran,	,,	Arta, Kræck, . .	Sw.
Spiegel entelein, .	Ger.	Cor-hwyad, . .	Welsh.
Kriekente, . . .	,,	Brach-hwyad, .	,,

The teal is a swimming bird of the family Anatidæ and sub-family Anatinæ, and of the genus Querquedula, and several species are known. They are of somewhat slender make, and fly very rapidly. Teal have long been prized as a delicate food. Willughby remarks that for the taste of its flesh and the wholesome nourishment it affords the body, it 'doth deservedly challenge the first place among those of its kind.' In the Portraits d'Oyseaux 1557, the following quatrain celebrates its excellence, and alludes to its habits:—

'Bien peu souvent se plonge la sarcelle
Entre deux eaux, de lequelle la chair
Est delicate; aussi couste elle cher
Autant qu'oyseau qui soit petit comme elle.'

Accordingly it held a high place in ancient feasts. We find it among the 'goodly provision' at the banquet given at the enthroning of George Nevell, archbishop of York, in the reign of Edward IV.,—'mallardes and teals, 4000.' The price in the Northumberland Household Book is, 'Teylles, 1d., mallards being 2d.'

Q. crecca, *Linn.*, the common teal of India, is 14½ inches long. It is migratory, and breeds in the northern and temperate regions, but it is one of the most abundant, as also one of the earliest visitors to India. It arrives early in September, and frequents both tanks and rivers, often in immense flocks. Its flight is amazingly rapid. Large numbers are netted and caught in various ways to supply the tealeries. It is a night-feeder. It is most excellent food.

Q. circia, *Linn.*, the blue-winged or Garganey teal, is distributed over the greater portion of the Old World. It is even more abundant in India than the common teal, but is somewhat later in its arrival. It has a swift flight, occurs in vast flocks, and feeds at night. Vast quantities of this and Q. crecca are caught alive, some by large flap-nets, others by nooses fixed to a long line across a jhil, and in some places by a man wading, with his head above water concealed in a large earthen pot, several of which have previously been set afloat.

Q. formosa, the Japanese teal, is very beautiful; is likewise a native of North-Eastern Asia. being found in Japan and Manchuria.

Q. glocitans, *Pallas*, is the clucking teal of India. It is a rare bird both in Europe and in India, and appears to be most common in Northern Asia on the borders of Lake Baikal, and in China and Japan. It has a peculiarly loud clucking call, mok-mok-mok-lok!

The whistling teal is the Dendrocygna awsuree. Other species are Q. falcata, *Pallas*; Q. Javana, *Bodd.*; Q. Manillensis, *Mull. and Schl.*; and Q. numeralis, *M. and Sch.*—*Jerdon*, ii. p. 806.

TEASEL.

Fuller's teasel, . .	Eng.	Kratzdistel, . . .	Ger.
Fuller's thistle, . .	,,	Cardo da cardare, .	It.
Chardon à carder, .	Fr.	Cardeucha, . . .	Sp.
Weber-distel, . .	Ger.	Cardo peinador, . .	,,

This plant is the Dipsacus fullonum of botanists. It is cultivated in England; clothiers employ the crooked awns of the heads for raising the nap on woollen cloths, etc.—*M'Culloch; Faulkner.*

TEA-TASTER, a person who tests the qualities of teas in the Chinese ports, or in the London brokers' offices.—*Simmonds' Dict.*

TECOMA, a genus of elegant plants of the order Bignoniaceæ. Several species occur in India, and others have been introduced. T. jasminoides has pink flowers. T. radicans is a climbing glabrous plant. It grows against a wall by throwing out roots from its branches in the same manner as ivy. Its large flowers are called trumpet-flowers. T. stans is a small tree or ornamental garden shrub. Its roots are reputed diuretic.

TECOMA CAPENSIS, *Lindl.*, is the Bignonia Capensis, *Thunb.*, an elegant creeping plant with orange-coloured flowers, well adapted for covering a wall or running up a trellis-work; grown from seed in common garden soil.

TECOMA UNDULATA. *G. Don.*

Bignonia undulata, *Roxb.*

Bug-trora . .	of Bombay.	Reg-dawan, . .	Pushtu.
Rohira, Lahura,	Panj.	Reodan, Rebdun,	,,
Luar, ...	,,	Khew, ...	Sind.

A small stiff-looking tree occurring in the arid tracts from Dehli westward through Hurriana and the Central Panjab to the Salt Range and Trans-Indus, where it grows up to 2500 or 3000 feet. Also in the Siwalik, and on the Beas below Kangra. This has perhaps the handsomest flower of any indigenous Panjab tree, and its gorgeous orange-blossoms make quite a show in some parts in the west of the province. Trees of four and five feet are not uncommon; but at Sirsa, near the Sutlej, are seen trees up to 7 or 8 feet girth and 40 feet high. The leaves vary greatly in size. The foliage is browsed by cattle. The wood is hard, close-grained, and strong, but is rarely large or abundant; used for making charpoys, spinning-wheels, and ploughs in the Salt Range.—*Hort. Garden*, p. 6; *M. E. J. R.; Eng. Cyc.; Riddell; Powell, Handbook; Stewart.*

TECTONA GRANDIS. *Linn.*

Segun, ...	Beng.	Saga, ...	Mahr.
Ky-woń, . . .	Burm.	Jati, ...	Malay.
Jaadi, ...	Can.	Tekka, Malbal,	Singh.
Teak tree, . . .	Eng.	Tek maram, . . .	Tam.
Sagwan, . . .	Hind.	Teku, Teku chettu,	Tel.
Shalduna . of	Jubbulpur.	Pedda teku, . . .	,,

The places of growth and the character of the timber of this tree are noticed under Teak. The teak tree is of rapid growth, and the trunk grows erect, to a vast height, with copious spreading branches. In 25 years the teak attains the size of two feet diameter, and is considered serviceable timber, but it requires 80 years to arrive at

maturity. A forest patch of teak, when in full bloom, has much the appearance of a field of ripe corn when viewed from a distance, with a few spots of green interspersed; by this appearance the native hill people discover the trees of teak, and at one season cut around their roots to prevent the sap from ascending the next year. The persons who work the forests of teak on the sides of the hills are thus able at a distance to distinguish the trees from the others. Mr. Conolly, about the year 1848, commenced planting teak seeds in Malabar, and since then additional land has been occupied by teak plantations. As the best method of rearing young trees, take a layer of fresh stable manure, three inches to be first strewed over the bottom of the trench, then four inches of decaying leaf-mould, then one inch of wood-ashes, and over this about six inches of a light sandy soil. The fine silt from the bed of a tank is the best. The seeds of some trees, like the tamarind and nim, sprout most readily when put in very thickly in handfuls at two inches from the surface. Some trees come up in three or four days, others in ten or twelve, while a few appear to have a particular month for coming up, and they remain in the ground without germinating till a particular season. This has been remarked with the Adansonia and teak. It may occur with other trees. A good mode of rearing the teak tree is to steep the nuts in water for 36 hours, then sow them in holes four inches apart and half an inch under the surface, covering the beds with straw so as to prevent evaporation, and gently watering them every evening. The seeds sprout in from four to eight weeks. Teak does not frequently spring up under shade. The prevalence of other trees, therefore, over teak is a great hindrance to the growing up of seedlings in sufficient quantity to replace those trees that have been removed. Young teak is not injured by elephants. It belongs to a family of plants, Verbenaceæ, that affords no fodder for animals; and Dr. Falconer satisfied himself, in passing repeatedly through forests infested with wild elephants, that they do not cause the slightest injury to young teak.

Tectona Hamiltonia, *Wall*, Ta-hut, Ta-nap, BURM.

This species of teak grows on the banks of the Irawádi, at Segaen, Prome, Ava, and at the foot of Taong-Dong, and, from native descriptions, Dr. Mason imagines it is found in the province of Yay. It flowers in March; its wood is inferior to that of T. grandis. — *Drs. Roxburgh, Wight, Falconer, Mason, M'Clell., Gibson, Cleghorn, Stewart, and Brandis; Mr. Rohde; Mr. Earl; Mr. O'Riley.*

TEE. BURM. Properly h'tee, the umbrella which crowns the top of a Burman praw or pagoda, without which it is not considered to be sanctified. In restoring that of the Shooay-dagon at Rangoon, which had been destroyed by an earthquake in 1769, the king of Ava attended with an army of 50,000 men.—*Cole. Myth. Hind.* p. 397.

TEEA, a Bornean weight, the sixth part of the mace; about 6¼ grains. –*Simmonds' Dict.*

TEEBA. HIND. Sand ridges in the desert of India.

TEEJA or Zeearat. HIND. In Muhammadanism, a visiting of the grave; also visiting the álam or standards.

TEE-KA-LOUNG or Tha-ka-dat-ghee. BURM. A timber tree of maximum girth 3 cubits, maximum length 22½ feet. Abundant at Mergui and Tavoy. When seasoned, it floats in water. It is a durable, tough wood, used for bedsteads, house-building, and helves or hammer handles.—*Captain Dance.*

TEELUK, Tika, or Akshata. HIND. A mark placed by Hindus in the centre of the forehead. If a grain or two of rice be fixed on it, it betokens that the person has performed his devotions. Telak-Matti, HIND., a grey slate in Cuttack, also from Neilgherry in Orissa, used by Hindus for making the sect marks on their bodies.

TEEN. TAM. Obsolete. Grief, sorrow, distress, same as old English. Spencer sings—

'Of God's high praise, and of his sweet love's teen.'

TEEN. HIND. Literally earth, dust, or clay. Adam, according to Muhammadan belief, was created from it.

TEEN-CHAOU. CHIN. The Chinese empire.

Teen-chuh, the Chinese name for India at the time of Christ.

Teen-choo-keaou, CHIN., the religion of the lord of heaven, the term used in China to designate the Roman Catholic religion.

Teen-chu-sze, a famous Buddhist monastery at Hankow in China.

Teen-how, literally queen of heaven, the goddess of the sea, called also Ma-tsoo-po. Every ship is furnished with this idol.

Teen-sin, China lunch, literally supporting the heart. See Tien.

TEEN-TSING-FOO or Tien-tsing, a Chinese city of great trade, particularly in salt, at the junction of the Eu-ho or Yun-liang-ho with the Pei-ho.

TEEN YARI. HIND. A name of the Shiah sect of Muhammadans, applied to them by the Sunni Muhammadans, because the Shiah reject the khalif Abubakr as the first successor of Mahomed, and claim the rule to have fallen to Ali.

TEER, properly Tevan, islanders, also written Tiyar, a race in Travancore, certainly immigrants from Ceylon. They occupy also Malabar, and are engaged in cultivation. Their women have forms of great symmetry, with a clear light-brown complexion, uniform and brilliant. The chaste women of their class wear no covering on the upper parts of their bodies. Their name is also written Iyuver or Juver; they are the toddy-drawers of Malabar, are a servile class who follow the rule of descent a matrice, and are polyandrous. On the Malabar coast they form a great part of the people; they are a fair, good-looking race, and until recently were treated as out-castes, and compelled to move from the road when a Nair approached. The Teer, educated in the Government schools, obtain service, are acquiring land, and are very well to do. They are fairer and more refined looking than the Nair. Both the Maldives and Ceylon are named as their original country. —*Caldwell.* See Kummaler.

TEERAT'H. HIND. Any holy place of pilgrimage visited by Hindus or Jains. Amongst the most celebrated are the Ganges at Hardwar; the town of Benares, Mount Abu, Panderpur in the Dekhan, Triputty in the Carnatic, Conjeveram, and Ramisseram. At Mount Abu a group of five of the twenty-four Jain pontiffs are more particularly reverenced, and distinctively called the

Panch-Teerat'h ;—Rishubdeva is the first ; Suntnath, the sixteenth ; Nemnath, the twenty-second ; Parswanath, the twenty-third ; and Mahavira, the twenty-fourth. Each has his sacred mount or place of pilgrimage (teerat'h), and each is recognised by his symbol or cognisance, viz. the bull, black antelope, conch shell, hooded serpent, and tiger ; and it is quite sufficient to find one of these symbols upon the plinth to ascertain the particular pontiff to which it belongs.—*Rajasthan*, ii. p. 724.

TEEREE, a small territory near Mussoori and Dehra Doon. Families of slaves lead to this day a grovelling existence, all around Barahaut, Ramonlie, Barraghad, and Danarghad, in the Teeree raja's territories. These unfortunates are of various Hindu castes, mostly low, and have been slaves from generation to generation. The men and women labour in open fields and in the house alike, and, except in very rare instances, absolutely devoid of all clothing. Their hovels afford no adequate shelter from the keen winds and biting frosts of a Himalayan winter. They obtain a bare sufficiency of the coarsest fare. All desire to escape into British territory, and whole villages in the Doon of Dehra are composed of fugitives fortunate enough to cross the watershed that divides Teeree from Mussoori. There would be a universal exodus of slaves, but for the vigilance of their taskmasters, who often capture runaways. These hapless bondmen behold the sale of their sons and daughters to buyers from a far country, and their moanings and regrets betray the internal agony that wrings their bosoms.

TEER-GHAR, in Bengal, a temporary structure for lodging a Hindu girl on the first occurrence of the menses. It may be outside the house, or in a corner of a room, enclosed on all sides by split bamboos, about a yard long, fastened by thread. This prevails throughout India.

TEESE OIL of Calcutta is the boiled linseed oil.

TEESTA, a tributary to the Brahmaputra. It rises in about lat. 27° 59′ N., and long. 88° 50′ E., and runs S.S.E. into the Brahmaputra after a course of 333 miles. It receives the Lachoong, 23 miles; Rungbo, 22 miles; Ranjit, 23 miles. It is navigable for craft of 6 or 7 tons as far up as Puharpur, 15 miles beyond the divergence of the Attree.

TEETH of animals, and teeth and tusks of elephants, form articles of commerce. The grinders or teeth proper are used for knife-handles and other purposes. The teeth of many carnivorous animals are used for necklaces and ornaments. Knocking out of the front teeth is a Negro custom, and a custom of Australia. Teeth are filed to a point in Brazil, and in Western Africa by the Otando, Apono, Tshogo, and Ashango tribes.—*Simmonds' Dict.*

TEHAMA, a political division of Yemen, in Arabia, extending along the whole sea-coast of that province washed by the Red Sea, with a varying breadth of from twenty to eight miles. Tehama is now a part of the Turkish empire ; its principal cities are Hodaida, Lohea, Mokha, and Jezan on the sea-coast, with Zebid and Bait-el-Fakih in the interior. Zebid town lies near one of the most beautiful and well-irrigated valleys in the country. Though still possessing many mosques and other public buildings, with a handsome aqueduct, much of its ancient regal splendour has departed. It still, however, possesses an academy where the youth of Yemen and Tehama receive a liberal education, according to modern Arabian ideas, and is besides one of the chief meeting-places where the merchants of Egypt, Arabia, and Persia assemble.

TEH-CHAU. All the Banner garrisons of China, save those of Fu-chu, Canton, Liang-chau, Ninghia, Chwang-liang, Tai-yuen, Teh-chau, and the nine inner garrisons of the metropolitan cordon, send up a small number of officers and men to Pekin to be there taught their duties in the hunting suite of the emperor, should he repair to the preserves of Muh-lan, at Jeh-ho (Zhehol). These are in the keeping of a tsung-kwin (3a), two yih-ching (4a), eight fong-yu (5a), and eight hiauki kiau or subalterns, all under the orders of the tutung of Jeh-ho.

TEHERAN is known from repeated observations to be 3600 feet above the level of the sea. It is in lat. 35° 37′ N., and long. 50° 52′ E. The plain on which it stands consists of the debris of limestone and trap-rocks. It is surrounded by a deep ditch, towers, and a mud wall, embracing a circuit of eight thousand yards, with four gates ; that to the south leading to Isfahan, that to the north-west to Tabreez ; the other two look towards the hills in the corresponding directions. Outside the walls there are suburbs of considerable extent, several large caravansaries, and many enclosed gardens. Inside, the principal object is the Ark, or Royal Palace, which occupies a large space of ground adjoining the northern wall, and is completely cut off from the rest of the town by its own circle of bulwarks. At all its issues sentinels keep guard, and at night no one can traverse the streets which skirt it without the password.

Teheran is a mud-built city of 100,000 inhabitants. It was made the capital by the founder of the Kajar dynasty in 1788. It stands on a vast plain. Looking to the west and south, only the faint outline of distant hills are visible. Looking northwards, the Elburz mountains are seen rising from advanced spurs some three or four miles off, their loftiest peak, Demavend, its base hidden by intermediate ranges, and distant about 50 miles, towers high over all, 20,000 feet and more, into the sky.

The Elburz mountains at this part have an older and more romantic celebrity attached to them than the gloomy fame they derive from Hasan Sahib and his sanguinary followers. The ancient Hyrcania, a country of warriors who are reported to have carried a charmed life, lying immediately north of these hills, their passes became the scenes of more than mortal combats between the simply brave heroes of Persia and these magician chieftains. They are also noted for having been the place of refuge of the illustrious prince Zal.

In summer the thermometer ranges in the shade between 95° by day and 86° in the night, and the people then live in the cellars, and sleep on the house-tops, while the court retires to the shah's summer palace on the slope of Elburz, or to the tents under which the descendant of the Turkomans loves still to dwell.—*Porter's Travels*, i. p. 309 ; *Quarterly Review*, No. 269.

TEH-P'UNG-SHAH. CHIN. A substance

brought from Ho-hien in Kwang-si, used along with borax as a vulnerary.—*Smith.*

TEHR, the Himalayan wild goat, Hemitragus Jemlaicus, *Jerdon*, pronounced Tare, also Tahir. It is the Jharal of Nepal. H. hylocrius is the Neilgherry wild goat, the ibex of Neilgherry sportsmen. Capra ibex is of Europe; C. Caucasica, the Caucasian ibex; C. walie and C. Nubiana are of N. Africa.

TEIMENI, a tribe of the Aimak who dwell in the Jolga-i-Herat, from Kerrukh to Sabzwar; the few who have extended to Farrah being styled by the Afghans, Parsivan. Each member of the Char Aimak knows no greater enemy than the Afghan, and all attempts to form Afghan colonies amongst them have failed. The Teimeni are of a wild, warlike nature, though agricultural.

TEINOSTACHYUM ATTENUATUM. *Munro.* A hardy bamboo of Ceylon, growing on the mountains at elevations of 4000 to 6000 feet. It attains a height of 25 feet. T. Wightii, *Munro*, is a common plant on the western mountains of the Peninsula up to 3000 to 4000 feet.—*Baron F. Von Mueller; Beddome.*

TEJA-CARNA, son of Icshwaku, last king of the Suryapala dynasty.—*As. Res.* ix. pp. 154, 183.

TEJBAL. HIND. The seeds and capsules of the Xanthoxylon hostile; they are employed by the natives of Northern India as a remedy for the toothache, and also for intoxicating fish. They have a warm, spicy, pepper-like pungency, a property which is participated in by the bark and other parts of the tree. The term is, however, applied to the capsules and seeds of several species of Xanthoxylon and to other drugs.—*Faulkner; Ben. Phar.*

TEJPAT, aromatic leaves of Cinnamomum albiflorum or of C. tamala, also called in Hindi Tamala patra. Tejpata is also applied to leaves of laurus or C. Malabathrum, the folia Malabathri of the ancients, and in Bengal it is given to the leaves of C. nitidum, *Nees.* Their odour resembles that of cloves; the flavour is aromatic and hot. Tejpat-ka-Phul, HIND., cassia buds.—*Simmonds' Dict.; Ben. Phar.* See Malabathrum.

TEJUREH or Tajurra, the seaport of the Danakeli, is governed by the chief of the Danakeli tribe, who assumes the title of sultan. It is on the E. coast of Africa, and contains about 100 huts, with about 500 inhabitants.

TEL. HIND. Any oil. Tel-i-gandhak, petroleum. Tel-Multani, oil scented with orange flowers. Tel-Siya, lit. black or coarse oil, rape-seed oil. Karwa tel, oil of azadirachta seed.

TELA. HIND. A blight on sugar-cane, like a dark powder.

TELAGA. TEL. A species of Gardenia, of the Godavery forests and Dekhan; has a very hard wood, would be very good for turning.—*Captain Beddome.*

TELAGA-BODAS, the Guevo Upas or Valley of Poison, at the side of the volcano Papandayang in Java, is 500 feet below the run of the old crater, which is now the Telaga-bodas or White Lake. It is a small bare place with many crevices, from which carbonic acid is poured, and many dead animals—dogs, cats, squirrels, rhinoceros, tigers, birds, and snakes—are seen in it.—*Bikmore*, p. 53.

TELEGRAPH PLANT of India, Desmodium gyrans, remarkable for the spontaneous jerking of the lateral leaflets, which are alternately raised and depressed.

TELEGRAPHS. At the close of the year 1880 there were in the United States 170,103 miles of line, and during that year 33,155,991 messages were sent. The miles of wire were about 300,000. This does not include the lines used exclusively for railroad business. The other countries having the greatest length of lines are as follow:—Russia, 56,170 miles; Germany, 41,431; France, 36,970; Austro-Hungary, 30,403; Australia, 26,842; Great Britain, 23,156; British India, 20,631; Turkey, 17,085; and Italy, 15,864. On the 17th May 1854 the first message passed between Calcutta and Bombay. Telegraphic wires were successfully laid between Suez and Aden on the 28th May 1859. The Red Sea Telegraph was opened on the 1st October 1859. The telegraph system in Japan, which dates from 1871, comprised at the beginning of 1882, 3929 miles of line, with 9345 miles of wire. The Japanese language having no regular alphabet, it became necessary for telegraphic purposes to form a combination of Morse characters to represent the sounds of the syllabary known as the Katakana. This was effected by using the letters of the international code, supplemented by others formed of five dots and dashes (figures excepted), to produce a total of 47 signs.

TELI. HIND. In India, a term applied to oilmen shopkeepers, who make and sell oils,—a humble avocation. Kahān raja Kishn, kahān Ganga teli, Behold the distance between raja Kishn and Ganga the oilman. They were over three millions in 1881. They occupy a respectable position among the lower castes; nevertheless, the higher castes will not permit them to touch their food. Most of them manufacture oil as well as sell it. In Benares they have a considerable number of subdivisions, which for the most part do not intermarry or eat together.—*Sherring.*

TELINGA, the name of a people and their language dwelling in the Peninsula. The term is supposed by some to be derived from the Sanskrit words Tri-lingam, the country of the three lingams. The country is known as Telingana, and extends from Pulicat on the north of Madras, as far to the north as Ganjam, and westwards to Triputty, Bellary, Kurnool, Beder, and Chanda, throughout the regions where Telugu is spoken; by Europeans the Teling are styled Gentoo. See Telugu.

TELINGA POTATO. ENG. Amorphophallus campanulatus, esteemed a very wholesome food. The large dark-coloured flowers have a very curious appearance.—*M. E. J. R.*

TELINI, Indian blistering fly, species of Meloe or Mylabris cichorei. The wing-covers are marked with large spots of light-brown alternating with deep-blue. Another blistering fly is small, steel-blue, Cantharis violacea.—*Ben. Phar.*

TELL. ARAB. A mound, generally ruins of some ancient city, as the mound or tumulus of Kala Jerablus, the ancient Carchemish, on the west bank of the Euphrates, rising in places 100 feet above the Euphrates. At Babylon, the Mujalibah, the Amran, and Jumguma mounds mark the sites of the palaces and temples of the mother city of Western Asia civilisation. At Nineveh, the Koyunjik and Nabbi Yunus mounds

mark the sites of the palaces of Assyria's kings; and at Kala Shergat or Assin, at Nimrud or Kalah, in N. Syria, cities of the Hittites, and on the banks of the Lower Euphrates, those of the cities of the Chaldæans.

Tell-el-Yahudi, the mound of the Jews, is 20 miles from Cairo, on the site of Matarieh or Heliopolis, the biblical On. It has long been regarded as enclosing the site of the temple built by Onias, the Jewish high priest, who led the colony of his countrymen from Jerusalem to Egypt, when the holy city and its temple were desecrated by king Antiochus Epiphanes (B.C. 168). The description of this temple given by Josephus is that it was built on the site of a deserted shrine dedicated to the Egyptian goddess Basht, statues of which divinity had accordingly been found at Tell-el-Yahudi, and that it was finally closed by Paulinus, after the destruction of Jerusalem. Excavations were made in the mound in 1870, when it was found that it covered the site of a walled enclosure, about half a mile long and a quarter broad, the best preserved portions of the walls being 15 feet thick, built in three thicknesses, much as the walls of the tomb of Osiris at Abydos. In the enclosure were found a subterranean passage descending under a part of the mound still unexplored, several broken statues, and a square chamber, enclosed by walls of well-cut limestone blocks, and paved with finely-polished alabaster slabs. In this chamber were four detached pedestals, two of which are in the Boulak Museum. The walls have been burned into lime by the Arabs. The chief objects of interest were the decorations of the chamber, which were of tiles, of a type hitherto unknown before mediæval times. Many of these tiles were brought to the British Museum. The ornamental tiles are of various kinds; all have patterns upon them; but some are simply in relief, and glazed with the ordinary bluish-green glaze so well known in the little Egyptian sepulchral statuettes; others are inlaid with mosaics, others with brilliant enamels. No such work is known to have been used either by the Egyptians or Assyrians in decorating their walls, although painted bricks were common enough, and mosaic and enamelled work were commonly used by both nations in small objects of personal ornament. In Persia, inlaid enamelled tiles have been used for many centuries; but no antique specimens are known. The greater part of the tiles from Tell-el-Yahudi are purely Egyptian in design, and many of them bear a title of Rameses III.; but some others (always of a circular form and without hieroglyphics) are distinguished from the rest by having stamped upon them, on the reverse side, the Greek letters A and E.

TELLICHERRI or Tallacheri, a seaport town in Malabar district, Madras, lat. 11° 44′ 53″ N., and long. 75° 31′ 38″ E.; pop. (1871), 20,479, including 12,608 Hindus and 7080 Muhammadans. It is 412 miles from Madras, and 9¼ miles S.E. of Cannanore. Its harbour has a natural breakwater formed by a reef of rocks 472 yards long, and a second parallel reef at a distance of 614 yards. Inside there is sufficient depth of water for a ship of 600 or 700 tons. The people are Moplah Muhammadans, Tiyar, Nair, and Mukwa.

TELMESSUS SERRATUS, a rare crab of the Gulf of Peh-chi-li.—*Adams.*

TELUGU is the language of Telingana, and the 17,000,358 people speaking it are partly subject to the British power, and partly to the Hyderabad State. The boundary line of this language may be roughly drawn from immediately north of Madras, where it meets the Tamil, by Kirkambari and Cuddapah to Bellary, where it meets the Canarese, skirting which it runs to the west of Beder to Dangapura and Murkunda; then, turning north and eastward and having Gondwana as its northern boundary, it rejoins the line near Vizagapatam, and at Chicacole it begins to meet Uriya. The most westerly spot at which it is spoken is the small town of Murkunda, about 30 miles west of Beder, and it reaches this by a wavy line running westerly from Sedashepet (Satyassi) on through Sungnam and Beder and Dungapura to Murghpetta or Murkunda; the villages in the whole of the line from Sedashepet to Murkunda, speak Telugu, Canarese, and Mahrati, and are called Si b'hasha basti, three-tongue towns. In ancient times, Telugu seems to have been spoken as far north as the mouths of the Ganges. This appears both from the geographical limits which the Greeks have assigned to the territory of the Andhra race, or Northern Telugu people, and from many of the names and places mentioned by Ptolemy up to that delta being found to be Telugu. Even now the Teling are tolerably pure along the southern boundary of Bustar, but Gond tribes are dwelling amongst them. Telugu is also called Telegu, Telinga, and Teluuga, and its meaning is doubtful. It is the Andhra of Sanskrit writers, a name mentioned by the Greek geographers as that of a nation dwelling on or near the Ganges. It is the same language which, until lately, Europeans termed the Gentoo, from a Portuguese word signifying heathen or gentile. In respect to antiquity of culture and glossarial copiousness, it ranks next to the Tamil in the list of Dravidian idioms, but it surpasses all of them in euphonic sweetness. See Telinga.

The Telugu people are a taller and a fairer race than the Tamilar, many of the more northern of them being equal in stature to the Aryan Hindu of the north. They are more Brahmanical than the Tamilian races, and are as bold and energetic as the latter, though less restless.

The Telugu people are the most numerous branch of the Dravidian race, although the Tamil surpass them in restlessness and enterprise, and in that self-reliance which supports them in their emigrations. Including the Naik or Naidu (Nayaka), Reddi, and other Telugu tribes settled in the Tamil country, who are chiefly the descendants of those soldiers of fortune by whom the Pandiya and Chola kingdoms were subverted, and who number not less than a million of souls, and including also the Telugu settlers in Mysore, and the Telugu inhabitants of the Nizam's territory and other native states, the people who speak the Telugu language are ascertained (1881) to amount to seventeen millions. Tamil and Telugu roots are in the great majority the same, but peculiarities in inflection and dialectic changes have so modified the modern tongues, that they differ from each other as much as Portuguese from Spanish, Irish from Welsh, Hebrew from Aramaic, and Hindi from Bengali.

The Teling race are good farmers, carefully

storing the rainfall in artificial ponds or lakes. They have been good infantry soldiers, but are not horsemen; they repeatedly drove back the Golconda and Beder armies. A considerable portion of the force with which Lord Clive fought the battle of Plassey was composed of Telings, and, until late years, perhaps even now, Teling was the term given in Northern India to the irregular foot soldiers employed there. Those engaged in civil life push their way fearlessly amongst the other nations on their south and west; many of them are seafaring men, undertaking long voyages, and a portion of them in former ages conquered and held large islands in the Eastern Archipelago, where, under the term Kling, from the Kalingapatam rulers, the peoples of India are still known. The Telings are partly Aryan, partly a non-Aryan people, but most of them follow outwardly the Brahmanical teachings, though adhering to many unorthodox rites; they are sober and staid, little impressionable, and not easily excited. A body of them, known as Reddi, a very energetic, enterprising race, have held large municipal rights for centuries. An extensive colonization of Southern India, by the Teling race, took place under the Bijanagar dynasty, and they still exist there as distinct communities. The Reddi migrated from their original seats near Rajamundry over the whole of Southern India, and even into the Maharashtra country, where they are met with as far north-west as Poona, and are considered the most thriving ryots. The Reddi are large men, good cultivators. Many of those in the Cuddapah collectorate were, till A.D. 1865, addicted to dacoity. In their marriages, in the south of India, a young woman of 16 or 20 may be married to a boy 5 or 6 years old, but she lives with some other adult male, perhaps a maternal uncle or cousin, or it may be with the boy-husband's father, *i.e.* her father-in-law, though she is not allowed to form connection with the father's other relatives. The offspring of these arrangements are fathered on the boy-husband. When he grows up, the wife has become old or past child-bearing, and he adopts the same course.

The Telugu country is nearly twice larger than the Tamil, but is less thickly populated. Considerable colonies of Telugu people have been formed in the Tamil country, who retain their own language. The Telugu country, as a borderland, has been subject to the devastation and rapacious oppression of conquerors from a distance, who yet would not so far settle among its people as to blend and have common interests with them, or establish well-ordered governments among them. The whole face of the country—dotted with hill forts, destitute of irrigation, with (till lately) large tracts of waste land, bare of gardens—bears testimony to this. The fewness of flourishing towns and of large temples; the presence, in all the larger villages, of petty forts, and in most of the smaller villages of round towers commanding the doors of all the houses, from which to fire upon gang robbers; the style in which the best houses are built, everything being sacrificed to strength and security,—all have the same significance. The abject servility towards courts and cutcherries is shown by the term devaravaru, God, with the honorific plural, applied to a superior, while the genius of the language forbids the use of anything but the singular for the deity. The common word in use for saving or taking care of anything, as money, is dapettee, hide. Only after the Disarming Act, consequent on the 1857 mutiny, the people of all classes got out of the habit of carrying arms with them. Except along the coast, hardly any Europeans penetrated into the Telugu country earlier than the beginning of the 19th century, and only since its middle have the efforts even of Christian missionaries extended beyond the limits of the town where they established themselves. The Telugu people compared with the Tamil are physically a larger, handsomer, and more robust race, partaking much of the Aryan element. The tall forms, drooping (yet broad) shoulders, and regular Circassian features of the Rayat and Reddi races in particular, are in strong and favourable contrast to the general make of the Tamil people. They are of a free, independent spirit,—not so tractable or plastic as the Tamil people. Under the robbery and oppression of former rulers, they emigrated, or in their turn became robbers; slavery is unknown among them. Though they are very jealous for caste as far as they do observe it, and will make great sacrifices for it, nothing like the extreme homage paid by the southern out-castes to the superior castes is either demanded or yielded in the Telugu country. Not like the Tamil people, only tell the Teling a thing, and they'll do it quietly; say a word to a Tamil, and the Tamilar answer you. Servility is confined to the Brahmans and Muhammadans of courts and cutcherries,—regions where the immediate presence of the former rulers used to be felt. The Rayat has a firm, stolid attitude, and a free, steady stare. The people avail themselves with avidity of their rights as soon as they become aware of them. The abuses that prevailed under the supposed sanction of Government were countless, but wherever it became known that any one of them was unlawful, it soon passed away. Telugu people, with all their ignorance, are ever ready to petition and appeal and to fight for their rights to the last. They are very faithful and submissive to lawful authority. Sircar is a magic word with them; and it is hard to say what extent of wrong they will not endure, if they believe it sanctioned by Government. Whether it is that the hard rule of their former masters taught them submission, or whether the instincts of a people emerging on the whole under a kind Government from a state of desperate oppression and anarchy to one of prosperity are necessarily peaceable, or whether, again, the nearness of the Nizam's dominions to all parts of the British-Telugu country teaches them to appreciate their present masters,—resistance to official power is never in any case dreamed of. They will evade, cheat, run away, appeal,—anything but resist. You never hear of a riot among the Telugu people, though they are spirited enough. The Tamil sepoy may perhaps be the more smart and active; but for good behaviour, solid steadiness in the ranks, and discipline, the Telugu man carries the palm.

The Telugu people not only are a conquering race, but in times of oppression and famine, when other Hindus remain to die in crowds, are used to emigrate, and wherever they go they attain respectability among the classes to which they belong. A

large proportion of Telugu Brahmans, merchants and bazarmen in Madras, hold very fair positions in their respective ranks. A good sprinkling of Reddi is to be found as far south as Tinnevelly. The numerous body called in the Tamil country Badagar or Vaduvar, north-men, are Telugu, and belong to the kapu or rayat, or agricultural class. All the bearers and Waddaru in the south are of Telugu origin. The flow of emigration gradually ceased with the returning prosperity of the country, and the rapid improvement of the Telugu people under what little European influence they have enjoyed, is a fair index to their capabilities. Their towns are beginning to be something worthy of the name. Money and the marks of it are rapidly on the increase. In the Rajamundry district and other parts, the people have thrown themselves into the indigo and cotton trade; and by traffic, under immense disadvantages, they make the western as well as the eastern coast their own.—*Rev. Dr. Caldwell.*

TEMBILI. SINGH. A variety of cocoanut in Ceylon, called king cocoanut, of a bright orange colour, and somewhat oval shaped.—*Simmonds' Dict.*

TEMBOW, or black-heart wood, grows in the Malabar forests to about 18 inches in diameter, and from 25 to 35 feet in height. It is a useful wood for general purposes in house-building, for native vessels, and implements of agriculture.—*Edye, M. and C.*

TEMMINCK, C. J., author of Coup d'Œil general sur les Possessions Neerlandaises dans l'Inde Archipelagique, Leide 1846.

TEMPLE, from the Latin templum, is the term by which Europeans designate the places of worship of the Hindus, the Buddhists, the Jains, the Japanese, and the Chinese. That of the Hindu is known also as the pagoda, a word the source of which has not been traced; but the Burmese call it prau, the Siamese wat, the Tamil people call it koil, the Telugu people call it gudi; by the Persian Muhammadans it is styled a But-Kada (But-Khana) or idol-house, and the Indian Muhammadans call it dewal, from Deo, god, and Alaya, a habitation. The better known temples of the Hindus in the south of India are those of Dwarka, Dewal or Somnath, Jejuri, Pandarpur, Triputty, Srirangam, Madura, Tanjore, Conjeveram, Ramnad, and Jaganath. Conjeveram is remarkable for possessing both a Saiva and Vaishnava shrine. Ordinarily, the Hindu temples of the south of India consist of the garbah-graham or shrine in which the vigraham or idol is kept. It is a square pedestal with one or more cupolas, and, where the cupolas are repeated, each is supported, one above another, by two bearers (dhari) at each of the four corners. There is a walled enclosure, at each corner of which, if a Saiva temple, is a figure of Siva's vahan, the bull Nandi; and if a Vaishnava temple, is a figure of Garuda, the eagle vahan of Vishnu. In front is the portico or arched colonnaded vestibule. In all the temples in S. India—such as Conjeveram, Srirangam, and others—the pilgrims are at liberty to go in and see the idol inside, without paying anything to the temple authorities. But at Triputty each pilgrim who wishes to have a look at the idol must pay one rupee for each visit,—one silver rupee, and not sixteen annas. Copper coins are no legal tender in the temple. Again, the stone idol here is dressed four times a day in different ways; and if pilgrims desire to see this they should pay one rupee for each visit. Again, if pilgrims wish to burn camphor before the idol, they will have to pay a rupee once more. In Rajputana the most celebrated temples are the Ek-Linga of Siva in Mewar; of Krishna at Nat'h-dwara; and the temples at Komulmer, Nadole, Mundore, Ajmir, Tamba-nagari, Kuraira, Barolli, Ganga-bheva, Dhumnar, J'halra Patun, Morakuro, Chitore, and Nagara.

In *Kashmir*, the whole of the building of Jyteshwara or Sankarachari temple is of stone, which is laid throughout in horizontal courses, no cement appearing to have been employed. This horizontal treatment is peculiar to most Hindu buildings in India, and is adhered to in all the ancient examples of Kashmir. The style of the Jyteshwara temple reproduces itself in all the Hindu Kashmirian buildings. The high-pitched pyramidal roof, the one, two, or more gables or pediments, the enclosing wall, and the character of the base mouldings, are features common to all.

In *Bengal*, the pediments and gables are slightly curved, and much more numerous; but alike in Kashmir and Bengal, the primary form was the square block surmounted by a pyramidal roof. The mode of elaborating the plan remained the same in both countries, and consisted in the addition of one or more projections to each of the original four sides of the square.

The various orders of Hindu sacred architecture are distinguished by the form of the sikra, which is the portion springing from and surmounting the perpendicular walls of the body of the temple. The sikra of those of Siva is invariably pyramidal, and its sides vary with the base, whether square or oblong. The apex is crowned with an ornamental figure, as a sphinx, an urn, a bull, or a lion, which is called the kallas. When the sikra is but the frustrum of a pyramid, it is often surmounted by a row of lions, as at Bijoli. In the mindra or cella is the statue of the god; the munduf, in architectural nomenclature, is the pronaos; the portico is the mandap or antarala.

In *Rajputana*, all temples dedicated to Bal-Siva, the vivifier or sun-god, face the east. The portico projects beyond the munduf; occasionally pilasters are placed on either side of the entrance to the munduf, serving as a support to the internal toran or triumphal arch. The Ek-Linga temple of Rajputana is of white marble, and of ample dimensions. Under an open-vaulted temple, supported by columns and fronting the four-faced divinity, is the brazen bull Nandi, of the natural size; it is cast, and of excellent proportions. Within the quadrangle are miniature shrines, containing some of the minor deities. Siva is represented with three eyes, hence his title of Trinitra and Tri-lochun, the Tri-ophthalmic Jupiter of the Greeks. From the fire of the central eye, according to Hindu belief, is to proceed Pralaya or the final destruction of the universe. This eye, placed vertically, resembling the flame of a taper, is a distinguishing mark on the foreheads of his votaries. But the ordinary marks on the foreheads of the Saiva sect are a round spot about the root of the nose, or a crescent on the forehead. The priests of Ek-Linga are termed Gosain or Goswami, which signify

control over the senses, and the high priests are celibates. The idol emblem of Siva is often called Bawa Adam or father Adam. The grand temple of Barolli in Rajputana is dedicated to Siva, whose emblems are everywhere visible. It stands in an area about 250 yards square, enclosed by a wall built of unshaped stones without cement. Beyond this wall are groves of majestic trees, with many smaller shrines and sacred fountains. Just before entering the area is a pillar erect in the earth, with a hooded snake sculptured around it. The body of the edifice, in which is the sanctum of the god, and over which rises its pyramidal sikra, is a square of only 21 feet; but the addition of the domed vestibule (munduf) and portico makes it 44 by 21. The whole is covered with mythological sculpture, without as well as within, emblematic of the great god (Mahadeo) Siva, who is the giver as well as the destroyer of life. In a niche outside, to the south, he is armed against the Dytea (Titans), the roond-mala or skull-chaplet reaching to his knees, and in seven of his arms are offensive weapons. His cap is the frustrum of a cone, composed of snakes interlaced, with a fillet of skulls; the cupra is in his hand, and the victims are scattered around. On his right is one of the maids of slaughter (Jogini) drunk with blood, the cup still at her lip, and her countenance expressive of vacuity; while below, on the left, is a female personification of death, mere skin and bone, a sickle (koorpi) in her right hand, and its knob a death's head, which completes this group of the attributes of destruction.

To the west is Mahadeo (Siva) under another form,—a beautiful and animated statue, the expression mild, as when he went forth to entice the mountain nymph Mera to his embrace. His tiara is a blaze of finely-executed ornaments, and his snake-wreath, which hangs round him as a garland, has a clasp of two heads of Sehesnag (the serpent king), while Nandi below is listening with placidity to the sound of the dumroo. His cupra and kharg, or skull-cap and sword, which he is in the attitude of using, are the only accompaniments denoting the god of blood.

In the northern compartment is a picture disgustingly faithful of death and its attributes, known to the people as Bhookha Mata, or the personification of famine, lank and bare, her necklace, like her lord's, of skulls. Close by are two mortals in the last stage of existence, so correctly represented as to excite an unpleasant surprise. The outline is anatomically correct. The mouth is half open and distorted; and although the eye is closed in death, an expression of mental anguish seems still to linger upon the features. A beast of prey is approaching the dead body; while, by way of contrast, a male figure, in all the vigour of youth and health, lies prostrate at her feet.

Dhumnar, famed for its Buddhist caves, has also been at one time a seat of the Vaishnava sect, and at another a seat of the Saiva religionists. There is a gallery 100 yards in length, terminating in a quadrangular court, measuring 100 feet by 70, and about 35 feet in height, hollowed out of the cellular iron-clay rock, in the centre of which is the temple of the four-armed divinity, Chatur-bhuja or Vishnu, the ground plan of the temple being the usual mindra and munduf and portico. Vishnu, who is here adored as the four-armed, is placed upon an altar clad in robes of his favourite colour (pandu or yellow ochre), whence one of his titles, Pandurang. The principal shrine is surrounded by the inferior divinities in the following order:—First on entering are the Polea or porters, Ganesa is upon the right, close to whom is Saraswati, whose throne is on the tongue, and on the left are the twin sons of Kali, the Bhairu, distinguished as Kala, black, and Gora, fair; a little in advance of these is a shrine containing five of the ten Mahabedia or ministering agents of Kali, each known by his symbol or vahan, as the bull, elephant, buffalo, and peacock. The Mahabedia are the evil genii, invoked in 'jup,' or incantations against an enemy, and phylacteries containing formulas addressed to them are bound round the arms of warriors in battle. At the back of the chief temple are three shrines; the central one contains a statue of Vishnu as Narayana upon his hydra couch, with Lakshmi at his feet. Two Dyta or evil spirits appear in conflict close to her, and a second figure represents her in a running posture, looking back in great alarm at the combatants. Smaller figures about Narayana represent the heavenly choristers administering to his repose, playing on various instruments, the murali or flute, the vina or lyre, the muyoora or tabor, and the mudhung and thal or cymbals, at the sound of which a serpent appears rearing his crest with delight. From the south side the eye has an unlimited range over the plains beyond the Chambal, even to Mundisore and Sondwarra. Descending some rude steps from that place of view, there opens a cavern, the roof of which is supported by one of those singularly shaped columns named after the sacred mounts of the Jains. Here everything on one side is Buddhist or Jaina, on the other all is Saivite or Vaishnava. At the entrance to an adjoining cave are various colossal figures, standing or sitting, characteristic of the Buddhists or Jains. There are representations of the deified pontiffs of the Jains, and a group of five are the most celebrated of the twenty-four, and distinctively called the Panch-Teerat'h, viz. Rishubdeva, the first; Suntnath, the sixteenth; Nemnath, the twenty-second; Parswanath, the twenty-third; and Mahavira, the twenty-fourth. Each has his sacred mount or place of pilgrimage (teerat'h), and each is recognised by his symbol, viz. the bull, black antelope, conch shell, hooded serpent, and tiger; and it is quite sufficient to find one of these symbols upon the plinth to ascertain the particular pontiff to which it belongs. At the farther end of the cave known as Bhim's Bazar is a dagoba supporting the roof. Two columns, called Sumeru, support the roof, and as Sumeru mount is sacred to Adinath, the first pontiff, it is likely that he was here worshipped. There is an extensive piazza, supported by rows of massive square columns, all cut out of the solid rock, evidently a dharmsala for pilgrims, and on the exterior are numerous square cells, the apartments of the Srawak or Jain laity. There are also many Pausid-sala or halls of the Yati, or initiated disciples, who stand in the same upright meditative posture as the pontiffs.

Jain architecture is as distinct in character from the Brahmanical as their religion. There is generally a chasteness and simplicity in their temples, affording a wide contrast to the ela-

borately sculptured shrines of the Saiva and other polytheist sects of India. The design of the Jain temple at Komulmer is truly classic, and consists only of the sanctuary, which has a vaulted dome and colonnaded portico all round. A temple at Hallybede, about 60 miles N.W. of Seringapatam, in Mysore, is almost identical with that at Komulmer. But Colonel Tod found that Saiva sectarians had introduced into the Jain temple of Komulmer a massive monolithic emblem in black marble of the Hindu Jivi-pitri. At Kuraira is a temple of some celebrity, dedicated to the twenty-third of the Jain apostles, Parswanath. There are inscriptions recording its foundation in S. 11, and several from 1300 to 1350. The temple is imposing, and though evidently erected in the decline of the arts, may be considered a good specimen of the twelfth century. It consists of two domes, supported by numerous massive columns of a species of porphyry of close texture, excessively hard, and taking a fine polish. The capitals of the columns are filled with figures of the Jain pontiffs. The domes are of nearly equal diameters, about 30 feet each, and about 40 in height; under the further one is the sanctum of Parswa. There is a splendid colonnaded vestibule at the entrance, richly sculptured, which gives a very grand appearance to the whole edifice, but it stands in the midst of desolation. In the Tinnevelly district is a rock temple, Kalugumalei, covered with Jain figures and inscriptions. These inscriptions have been pronounced the oldest specimens of the Tamil language hitherto discovered. The Tamil character of the inscription is different from the Tamil character of to-day, but the germ of the present character is contained in it. In a field close to Nagalapuram, in Ottapedaram taluk, is a colossal Jain image. There is a small Jain image in the village of Kolatur, and it is worshipped by the natives, who apparently do not know what it is. There is another in the ancient village of Kolkhei, near to Sawyerpuram. Many cinerary urns in cromlechs, notably in Courtallum. There are many iron implements and exquisite pottery in them. The neighbourhood of the Jain image at Nagalapuram abounds with these urns. The old Jain temple, Kalugumalei, is dedicated to the god Subramanya, Siva's youngest son. According to the oldest legends, Subramanya is the god of war, and that the Jains in the south were cruelly exterminated by the Saivites is a matter of history. Each inscription designates the image above it a Tirru Meni, the usual term for a Jain saint. Some of the Jain temples around Mount Abu are grand, and large sums have been expended on them.

In *Southern India* the great religious institutions are Srisailam in Cuddapah, Conjeveram, Chellambram, Srirangam, etc. There are also many others of great architectural merit, very worthy of being depicted and preserved for the beauty of their sculpture and elegance of their design, such as the stone mantapam in the fort at Vellore, since used as an arsenal and cutcherry; the temples at Tanjore, Gangondaram, and Tribhuwanam, the ruins of Bijanagar, the pagodas at Leepichi in Bellary, and of Tadpatry in Cuddapah, with many others equally worthy of admiration in secluded and desert places, little known beyond their immediate neighbourhood. Nearly all the finest buildings of early times have been constructed of stone, while the edifices of modern times, that is since about the fourteenth century, comprising some of the most stupendous piles at present to be met with, are of brick.

At Satara, a Hindu temple erected to Vishnu by Anand Rao Bhikaji, Rasti, cost Rs. 2,16,250, and he built a Wada at Wai in A.D. 1789 at a cost of Rs. 1,02,000.

The mandap or antarala is the entrance-hall of a Hindu temple. In front of a Hindu temple is the dipmal, usually a monolith pillar, on which lamps are suspended.

A Buddhist temple has the gala or neck of the dagoba, the garbha (womb), the shrine, the dome, the h'tee, the finial, and umbrella on a Burmese dagoba. In China, at the entrance of Buddhist temples there are generally placed colossal figures or pictures of four great beings, possessing different attributes. They are the polia or warders of the place. The Confucian temples have by rights no images in them, the monumental tablet being the object of worship among the disciples of Confucius, and before which they burn incense and pray. In all other temples the idols are multitudinous, not only of Buddha himself in his three attitudes, contemplation, exhortation, and repose, but of many other deities, such as the god of war, the god of agriculture, the queen of heaven, and numberless others.—*Frere, Antipodes*, p. 229; *Tod's Rajasthan; Cole. Ill. Build. Kashm.*

TEMPLE, Sir RICHARD, Baronet, G.C.S.I., C.I.E., D.C.L., a Bengal civil servant, author of India in 1880, Men and Events of my Time in India (1882). Whether as regards the varied offices held by him, or the great extent of the countries in which he served or which he visited, he was never surpassed by any servant of the British Indian Government. Amongst other offices, he was Secretary to the Governor of the Panjab; he was Foreign Secretary to the Government of India, Finance Minister to the Government of India, Chief Commissioner of the Central Provinces, Resident at Hyderabad, Lieutenant-Governor of Bengal. He was Governor of Bombay, from which he retired after a service of 33 years. He was born at Nash-Kempsey in Worcestershire, 8th March 1826. He was educated at Rugby and Haileybury, and entered the Indian Service 8th January 1847, and his career was marked by a continuous series of successes. His minutes and reports are models of clear, precise, and yet picturesque official writing. It was he who digested and compiled the Panjab Report on the Mutiny, also the Panjab Civil Code, the Report on the Trans-Indus Frontier Tribes; and perhaps few know that when the publishers of the Calcutta Review hesitated about continuing it, he secured its reappearance by guaranteeing them from all loss.

TENASSERIM, or Tha-neng-tha-ri, a tract of mountainous country between lat. 11° and 17° N., lying along the E. coast of the Bay of Bengal, and between it and a high chain of hills about 40 miles inland. It is British territory, a division of the province of British Burma, comprising the seven districts of Amherst, Tavoy, Mergui, Moulmein, Shwe-gying, Tounghoo, and the Salwin Hill tracts. Area, 46,780 square miles; population (1881), 825,741 persons. These districts formed

the tract south of Pegu which British India conquered from Burma in 1826, and were for many years generally known under their official name of the Tenasserim Provinces. The mountains, 40 miles inland, are about 500 miles in length, and in parts exceed 80 miles in breadth, and in places 5000 feet high. The small town of Tenasserim, in lat. 12° 6′ N., and long. 99° E., is built on the Great Tenasserim river. A chain of islands, called the Mergui Archipelago, runs along the coast 15 or 20 miles distant from it.

Coal occurs in several parts of Tenasserim on the Great and Little Tenasserim rivers. At Mergui the beds are very extensive, from 9 to 18 feet thick, and about 16 feet from the surface. The principal mine is about 90 miles up the Great Tenasserim river. It was at one time worked by Government, but from want of management did not prove remunerative, and was abandoned. The Mergui coal was regarded by the coal committee as true mineral coal, but of inferior quality. A similar coal is found on the banks of Tenasserim north of the latitude of Tavoy.

The principal metallic ores are tin, antimony, iron, gold, and galena, those of tin being widely diffused, and are worked.

The races and tribes occupying Tenasserim are Burmese, Karen, Lawa, Selon or Selung, Shan, Siamese, Tavoyer of Arakanese descent, and Talaing or Mon.

TENDA. TEL. A lever for raising water, the Pakota of Europeans in the Tamil country.

TENDUKHERA, a small town in the Narsinhpur district of the Central Provinces, in lat. 23° 10′ N., and long. 78° 58′ E. Population (1872), 3034. It has iron mines, which are leased by the Narbada (Nerbadda) Coal and Iron Company.—*Imp. Gaz.*

TENGAH. MALAY. A variety of the Rhizophora mangrove. It is exported to China, where it is used for tanning leather and fishing-nets, and is used locally as a dye, a decoction of it producing a deep-black colour when the cloth or substance has previously been dyed blue. It is plentiful in the mangrove forests on the coast and river-banks of the Province Wellesley.

TENGALAI, lit. the southern branch, a sect among the Southern Vaishnava, distinct from the Vadagalai or northern branch.

The Tengala follow the precepts of one Manavala Manumi or Ramyaja Matri, and the Vadagala claim Vedanta-chari or Vedanta Desica as their authority. Both of these saints were pupils of the same master, Ramanuja-chari, and neither sect speaks disrespectfully of the apostle of the other. Both sects worship Vishnu, and use the same rites, with some minor differences.

The Tengala and Vadagala, if of the same caste, may eat together and intermarry; but among no other sects are there such frequent and bitter quarrels. Tencalei means Southern Veda, and Vadacalei Northern, and in all probability the existing disputes have reference to the assumption of superiority of ritual on the part of some northern Brahmans settling in the south. The Tengala are most numerous in the southern provinces, and this fact would seem to confirm the view that the quarrel primarily arose from the northern people, the Vadagala, attempting to interfere with the established practices of the southern sect.

The great and really serious matter in dispute between the two sects is in regard to the mode of wearing the trident or caste mark. All Vaishnava wear their caste marks on the forehead in longitudinal form, while the Saiva wear theirs horizontally or as round dots.

Some old Sanskrit authority has laid down that the Vaishnava marks shall extend from the nose to the hair, but no one seems to know who the authority was, or in what book the statement was made.

This very dubious authority seems to have been the cause of the quarrels of the sects. The Vadagala or Northern Vaishnava say that from the nose means any part of the nose, and so begin their marks at the root of the organ, between the eyebrows. The Tengala argue that everything has a beginning, a middle, and an ending, so they begin their marks on the upper part of the nose itself, considering that the organ is divisible into three parts. The trident is the same in both sects, only that one carries the middle line a little way down the nose, while the other stops short at the root of the nose. Women of the Vaishnava sects do not wear the trident, but a single straight yellow line from the hair to the nose. This weighty matter is a cause of constant clashing between the sects. If an old temple of Vishnu is found with the trident carved upon it after the fashion of the Vadagala sect, they claim the temple and endowments as belonging to their party, and appeals are sometimes made to the law courts for the settlement of these disputes. All Vaishnava resort to all Vaishnu temples without any sectarian differences.

TENGGER MOUNTAINS, a range in Java connected with Gunungdasar, E. of Sourabaya, where a remnant of the people still follow the Hindu worship. These people occupy about 40 villages, scattered along this range of hills in the neighbourhood of what is termed the sandy sea. The site of their villages, as well as the construction of their houses, are peculiar, and differ entirely from what is elsewhere observed in Java. They are not shaded by trees, but built on spacious open terraces, rising one above the other, each house occupying a terrace, and being in length from 30 to 70 and even 80 feet. The door is invariably in one corner, at the end of the building, opposite to that in which the fireplace is built. At the interment of an inhabitant of Tengger, the corpse is lowered into the grave with the head placed towards the south (contrary to the direction observed by the Muhammadans), and is guarded from the immediate contact of the earth by a covering of bamboos and planks.

This terrace practice seems to have once prevailed in the Philippines. The inhabitants of the Serwatti Islands select the summits of hills or the brows of cliffs which rise abruptly from the sea, as sites for their habitations. The crest or extreme summit of the hill is occupied by a large waring tree, the Ficus Indica of Rumphius, beneath which the idols of the village are placed on square platforms of loose stones. Here the elders meet when any important matter is to be discussed. Below the tree the sides of the hills are scarped into a succession of platforms or terraces, on which are erected their oblong barn-like houses, with wooden walls and palm-leaf thatch. At Letti, a neighbouring island, where the hills are far

Inland, the brows of the cliffs which overhang the sea are selected, and a similar mode of scarping into terraces is adopted when necessary. The same system also prevails at Baba and Timor Laut. The Serwatti islanders have a more general resemblance to the inhabitants of the South Sea Islands than to those of the Indian Archipelago. They are taller and fairer than the Malays or Bugis. They wear a waist-cloth made of cotton orof the bark of the paper mulberry, and allow their long wavy hair to float over their shoulders, or tie it at the back of the head. Their vessels, the cora-cora, are long and graceful, with low sides and great breadth of beam, high stems and sterns, which rise like horns at each extremity of the vessel, and are ornamented with festoons of large cowrie shells and bunches of feathers. Major Hamilton, H.M. 21st M.N.I., who had travelled in Java, mentions that he found the same system of terracing amongst the Malai Arasar or hill kings of the Pulney Hills in the extreme south of India.—*Raffles' Java*, i. p. 329.

TENGHE, a silver coin current in Central Asia. In Bokhara 24 make an English pound, but in Khiva 40.

TENIMBER ISLANDS. The groups of the Arafura Sea consist of the Tenimber, the Ki, and the Aru groups, with others of inferior significance. They are scattered over a considerable space, and vary in size from 70 miles in length to mere tufts of verdure floating in the sea, like baskets of grass and flowers, crowned by tall clumps of palm. The Tenimber Islands are inhabited by a race half savage in manner, whose villages, built on lime-stone hills near the shore, combine, with the varying outlines of the surface, the fresh and green aspect of the interior slopes, and the blue water in the channels between, to present a graceful prospect to the navigator's eye.

TENKAIA. TEL. Cocos nucifera, the nut. Several products of this useful palm receive distinct names, as Tenkaia bellam, sugar from the palm; Tenkaia gurutu, cabbage; Tenkaia kalu, palm wine; Tenkaia yennai, cocoanut oil. The cocoanut palm is called in Telugu by two names, Tenkaia chettu, and Kobbari chettu. Tennam kittu, TAM., cocoanut leaves used in thatching; Tenna maram, cocoanut palm; Tennam-kai, nut; Tennam-nar, the coir fibre; Tennam-kalu, the palm wine; Tennam oli, the cadjan leaf used for writing on with a style instead of paper and a pen.

TENNENT, SIR JAMES EMERSON, a Ceylon civil servant, author of Sketches of the Natural History of Ceylon; also of Christianity in Ceylon.

TENREIRO. Antonio Tenreiro, in 1520 was sent by the Portuguese Governor in India on an embassy to the Persian court. He went by way of Ormuz; and his narrative, which was published at Lisbon in 1763, is one of the earliest accounts we possess of the trade through Persia at the time when it first began to be affected by the competition of the Cape route.

TENTS are used as dwellings by all the nomade tribes of Asia, and by many of the races settled in towns. They are used throughout India by all travellers of any position, and during war are carried by the armies. They are made of cotton canvas, lined or unlined. A double-poled regulation tent, of four cloths throughout, with four feet verandah, complete, with carpets, bamboo chicks, purdahs, gunny bags, and ropes, 28 feet by 16 feet, will cost Rs. 670, and 23 feet by 14 feet will cost Rs. 520.

A single-poled regulation tent, of four cloths throughout, with four feet verandah, complete as above, 16 feet square, will cost Rs. 450; 12 feet square will cost Rs. 310.

Hill tents with four folds of cloth throughout, complete as above, 14 feet square, with two saiban, Rs. 265; 10 feet square, with two saiban, Rs. 200.

Swiss cottage tents, double fly, with saiban, complete as above, 16 feet square, Rs. 390; 12 feet square, Rs. 300.

Rowti, five cloths to the fly, and four to the kanat, complete as above, 16 feet by 14 feet, Rs. 210; 13 feet by 12 feet, Rs. 175.

Shamianah, 40 feet square and 12 poles, Rs. 400; 15 feet square and 4 poles, Rs. 90.

Bechobah tents, five cloths in fly, and four in kanat, as above, 12 feet square, Rs. 135; 8 feet square, Rs. 90.

Necessary tents and tents for servants, called pal, as also stable tents, are in use.

The pastoral races of Asia, who dwell in tents, make them of black felt. Indeed, the term nomade designating these migratory nations is from Namad, a felt.

The northern Arab calls the tent his house (beit). The covering (zhaher-el-beit) consists of pieces of stuff made of black goats' hair, stitched together according to the depth of the tent. Some tents are of goats' hair stuff, white and black. It effectually keeps off the heaviest rain. It is supported by nine poles or posts (amound or column), three in the middle and an equal number on each side. These several poles have distinct names. The middle ones are seven feet high; the side ones only five, which obliges the person who enters to stoop a little. The tent is open before, and closed on the sides and back part to keep out the wind. It is divided into two parts; the men's apartment (mekaad rabiaa) and the women's (maharram), separated by a white woollen carpet drawn across the tent, and fastened to the three middle posts. In the men's apartment a carpet is sometimes laid on the ground. They recline upon the camels' pack-saddles, the wheat sacks and camel bags being piled up round the middle post. The women's apartment is the receptacle for the cooking utensils, the butter and water skins, the provisions, and all the lumber of the tent.—*Robinson's Travels*, ii. p. 133.

TEPHROSIA, a genus of plants of the order Fabaceæ; about thirty species are known to occur in the south and east of Asia. Tephrosia candida, the fisher's tephrosia, contains the narcotic principle of the genus, and is used in the East Indies to poison fish, as T. toxicaria is in the West Indies. It is the Lehtia of Kamaon, and is a handsome white-flowered shrub of the Sub-Himalayan tract, Eastern Bengal, and Burma. T. apollinea is a native of Egypt, and yields a blue dye.

TEPHROSIA PURPUREA. *Pers.*

T. stricta, *Grah.*
T. lanceæfolia, *Lind.*
Galega purpurea, *Linn.*
G. colonila, *Ham.*
G. lanceæfolia, *Roxb.*
G. cærulia, *Rottl.*

Ban-nil,	BENG.	Punkhi,	SANSK.
Surpunka,	HIND.	Kat kolingi,	TAM.
Kolinil,	MALEAL.	Vempali,	TEL.
Bansa,	PANJ.	Bonta vempali,	,,
J'hojru,	,,	Tella vempali,	,,

This small shrub occurs in the Panjab and North-West Provinces of India, from the Salt Range to Dehli, and is common on the eastern coast of the Peninsula. In Hurriana the twigs are used for making baskets. The root is bitter, and given by the native practitioners in dyspepsia and chronic diarrhœa, as an alterative tonic and febrifuge.—*O'Sh.* p. 292; *Powell*, i. p. 340; *Roxb.*

TEPHROSIA TINCTORIA. *Pers.*

T. hypargyrea, *D.C.*	Galega Heyneana, *Roxb.*
T. nervosa.	
Ceylon indigo, . . ENG.	Anil, ... SINGH.

This small plant is found in Mysore and in Ceylon. It yields a blue colouring matter, used for the same purposes as indigo.—*Roxb.*; *Voigt.*

TEPPA. TEL. The catamaran of the Coromandel coast.

TERA, the Buddhist temple of Japan.

TERAH, father of Abraham, Haran, and Nahor. He left Ur of the Chaldees for Haran (Harra), *i.e.* back towards Asroene or Sarug, on the way to Canaan. Abraham, Haran, and Nahor were born at Ur.

TERAH-TEZI. HIND. The first 13 days of the month Safar, during which Mahomed was seriously unwell. On the 12th or 13th day Muhammadans bathe and distribute food.

TERAI, a valley at the foot of the Himalayas, which varies in breadth from 10 to 30 miles. The Nepal Terai is called the Morung. The Terai is a belt of forest that runs along the foot of the Himalaya from Oudh to Assam. The sal and the sissoo trees grow abundantly, and their timbers are floated down the rivers Konki and Kosi.

The soil of the Terai is composed of alternating beds of sand, gravel, and boulders brought from the mountains, and the soil is generally light, dry, and gravelly. The large blocks are near the mountains, but the gravel beds extend for fully 20 miles south of the Sikkim mountains.

For nine or ten months, a disease, denominated by the natives the 'Ayul,' renders the Terai impassable even to the natives of the country. At the north foot of the Khassya, in the heavily timbered dry Terai, stretching for 60 miles to the Brahmaputra, it is almost inevitable death for a European to sleep any time between the end of April and November. Temperature in September, 77° to 80°; and in November, 75° to 77°. The Terai of the Nepal dominions is profitable from the revenue yielded by its productions. Valuable timber and turpentine, ivory, and hides are shipped down the Buri Gandak, on which river Segowlee is situated, to Calcutta. This district, along with Kamaon and other hill tracts, was ceded to the British Government after the Nepal campaigns of 1815 and 1816, which were undertaken in consequence of the systematic designs of the Nepalese to encroach on the territories north of Bareilly and Oudh, which formed part of the British possessions. According to the terms of a treaty assented to by the Nepal Government, the lowlands between the Kali and Rapti rivers, and further east up to the Gandak, were transferred to the British Government.

In the Terai which borders the Sarda river, no attempts have been made to utilize the land, to clear away the forest, to make roads, or introduce any scheme of drainage. For a few months in the winter, cattle graze on the prairies, but many buffaloes and bullocks are destroyed by tigers, in spite of the precautions taken to drive them home before sunset, and prevent their straying into the forest. Cattle, indeed, are very often pulled down in broad daylight, the shepherds in charge not daring to interfere. There are extensive swamps and jhils, overgrown with tall feathery grass, of which Bamania Tal is said to be the largest stronghold of tigers in the district. There are a few rhinoceri in this swamp, where the reeds and grass are very dense. The Sikkim Terai gives us the Dhimal, the Bodo or Mechi, and the Koch, which latter also occupy the plains of Koch-Bahar, and the northern parts of Rungpur, Dinajpur, and Purnea.—*Hooker, Him. Journ.* i. p. 266; *Oliphant's Journey*, pp. 39, 173. See Tarai.

TERAIYAR is said to have been one of the twelve disciples of Agastiya. Three treatises on medicine bear his name, but their real authors are unknown, viz. Sikamani Venpa, Nadikottu, and fragments of a work on hygiene, Noyanukaviti.

TERI TOI, a river in the Kohat district, Panjab, formed by the junction of two streams, which rise in the eastern border of Upper Miranzai, and unite about 10 miles due west of Teri town; thence the river flows eastward until it joins the Indus.—*Imp. Gaz.*

TERMES, the White Ant; Termites (pl.).

Dewak, ... HIND.	Chellu, ... TAM.
Dotus, ... JAP.	Chathulu, . . . TEL.

Species of this insect are abundant in India, Ceylon, the Cape of Good Hope, and St. Helena, and attract attention from the large conical mounds of earth which they erect, and the destruction they produce in timber. The ordinary white ant has the head large and rounded, and, besides compound eyes, it has three ocelli, or simple eyes, situated on the upper surface; the antennæ are as long as the head and thorax, inserted in front of the eyes, and composed of about 18 joints. The abdomen is terminated by two small jointed appendages. As the lofty mounds of earth are all carried up from beneath the surface, a cave of corresponding dimensions is necessarily scooped out below, and here, under the multitude of miniature cupolas and pinnacles which canopy it above, the termites hollow out the royal chamber for their queen, with spacious nurseries surrounding it on all sides, and all are connected by arched galleries, long passages, and doorways of the most intricate and elaborate construction. In the centre and underneath the spacious dome is the recess for the queen,—a hideous creature, with the head and thorax of an ordinary termite, but a body swollen to a hundred times its usual and proportionate bulk, and presenting the appearance of a mass of shapeless pulp, weighing as much as 30,000 labourers. From this great progenitrix proceed the myriads that people the subterranean hive, consisting, like the communities of the genuine ants, of labourers and soldiers, which are destined never to acquire a fuller development than that of larvæ, and the perfect insects, which in due time become invested with wings and take their departing flight from the cave. But their new equipment seems only destined to facilitate their dispersion from the parent nest, which takes place at dusk, and almost as quickly as they leave it they divest themselves of their ineffectual wings, wearing them impatiently, and twisting them in every direction till they become detached and drop

off, and the swarm, within a few hours of their emancipation, become a prey to the night-jars and bats, which are instantly attracted to them as they issue in a cloud from the ground. Those that escape from the caprimulgi fall a prey to the crows on the morning succeeding their flight. The natives of India, also, in the morning, gather and eat them, fried with a little ghi, as they are pleasant tasted. One species of white ant, the Termes taprobanes, was at one time believed by Mr. Walker to be peculiar to Ceylon; but it has been found in Sumatra and Borneo, and in some parts of Hindustan. In Ceylon, Termes monoceros builds its nest in the hollow of an old tree, and, unlike the others, carries on its labours without the secrecy and protection of a covered way. The cobra snake generally makes its home in the caverns of the white ant, and it is believed to live on the termites within. At Vasarapad, near Madras, are many ant-hills with numerous cobra snakes. About one mile from Somerset, in the northern extreme of Queensland, at the eastern entrance to Albany pass, white ants have raised their hills to heights of 16 feet.—*Tennent's Ceylon*, p. 413; *Moresby*, p. 13. See Ants; White Ants.

TERMINALIA. This genus of plants is found in the tropical parts of Asia and America, and many of the species furnish valuable timber and other useful products. The genus belongs to the natural order Combretaceæ; about 17 species are natives of the E. Indies. The bark of T. arjuna is used in India in medicine for its astringency, and in dyeing, as that of T. benzoin in the Isle of France. The galls found on the leaves of T. chebula are powerfully astringent, and used in dyeing yellow and black; the ripe fruit of T. belerica is reckoned astringent, and that of T. Moluccana is like it. That of T. chebula, in an unripe state, and of different ages, has long been known under the names of black, yellow, and chebulic (Kābuli, from Kābul) myrobalans, and considered generally laxative. The fruits of T. citrina, T. angustifolia, and T. Gangetica are like that of T. chebula, and employed for the same purposes. The kernels of T. catappa have the same Hindi-Persian name, badam, applied to them, as to those of the common almond; they are eaten as such, and are very palatable. Dr. Royle had seen the tree as far north as Allahabad, in gardens. The kernels of T. Moluccana and those of T. belerica are also eaten. From the latter a gum exudes. A milky juice is described as flowing from T. benzoin, *Linn.*, which, being fragrant on drying, and resembling benzoin, is used in churches in the Mauritius as a kind of incense.

The more important species of the E. Indies are T. alata, arjuna, belerica, bialata, catappa, chebula, citrina, fœtidissima, myriocarpa, paniculata, procera, pyrifolia, and tomentosa.

TERMINALIA ARJUNA. *W. and A.*

Pentaptera arjuna, *Roxb.*	P. angustifolia, *Roxb.*
P. glabra, *Roxb.*	
White aeen, ANGLO-HIND.	Koha, Jamla, . . HIND.
Arjun, . BENG., HIND.	Kahua, Kowah, . MAHR.
Sadara, . . . BOMBAY.	Azun, ... ,,
Touk-kyan, . . . BURM.	Jumla, Kukhsoba, PANJ.
Belee waulkee, . . CAN.	Vella mutti, . . TAM.
Arjuna, DUKH., SANSK.	

This large tree grows in the Panjab, in Bengal, in the Irawadi jungles, south-east of Surat, and in Canara and Sunda, but only by rivers and streams, mostly below the ghats. As a forest tree, it is rare in the northern parts of the Bombay side, but very common in the South Konkan, from Ramgarh southward, and there too always found in the vicinity of streams and rivers. It reaches everywhere a very large size. It is common throughout the Madras Presidency, growing near the banks of rivers, up to an elevation of 3500 or 4000 feet; it is largely planted as an avenue tree, particularly in the Tinnevelly district, where it attains an immense girth, and is often furnished with very large buttresses. It is also found in Bengal, Bombay, and Burma. The wood is used for building, and boats are often made from it; it is inferior to the Terminalia tomentosa, but a valuable timber. It flowers in April and May, and the seeds ripen towards the close of the rains.

In the southern forests of Pegu, next to teak, the most valuable kinds of timber are T. glabra and T. arjuna, which present clean trunks of 6 to 8 feet in diameter, and 50 to 80 feet high without a branch. The bark is justly celebrated as an application to wounds.—*Col. Beddome, Fl. Sylv.; Mr. Gamble; Drs. Roxb., Voigt, Gibson, M'Clelland, J. L. Stewart, and Mason; Capt. Sankey.*

TERMINALIA BELERICA. *Roxb.* ii. p. 431.

Beleyluj, ... ARAB.	Vibhituka, . . SANSK.
Tit-sein, Ban-kha, BURM.	Bulu-gass, . . SINGH.
Bulla, ... DUKH.	Tandi maram, . . TAM.
Beleric myrobalan, ENG.	Tani kāia maram, . ,,
Bahira, . HIND., SANSK.	Tondi, Tadi chettu, TEL.
Berda, Yehela, . MAHR.	Katthu elupa, . . ,,
Tani, ... MALEAL.	Bahadha, Bahadrha, ,,
Beleyleh, ... PERS.	

This very large forest tree has a straight trunk and a spreading head. It grows in Ceylon up to an elevation of 2000 feet on the open grassy plains, and it is found throughout India; is not uncommon in the Walliar jungles of Coimbatore, grows on the Siwalik tract, and at Peshawur, and occurs, planted, up to the Indus. Grows also in Goalpara, Sukanaghur, Gorakhpur, Dhomtola, Morung mountains. Flowers small, greyish-green, offensively smelling. The wood is white or yellowish, coarse-grained, and soft, but is used and is said to be tolerably durable; it answers well for packing-cases, coffee-boxes, and catamarans; grain measures are made from it; and in Malabar and South Canara the tree is sometimes hollowed out for canoes. The fruit is used in dyeing and tanning, and the leaves also for the latter purpose; the dried fruit is said to be similar to the Ægle fruit; an oil is expressed from the seed, which is used for strengthening the hair. In the Bombay Presidency it is found abundantly in all the inland and the coast jungles, but although one of the largest and finest-looking trees in the forest, straight, and of great scantling, it is there quite useless as a building timber, being immediately attacked by worms. Bark, when wounded, gives out a large quantity of an insipid gum. Its fruits are known as the beleric myrobalans; they are astringent, tonic. Kernels, tasting like filberts, eaten by the natives, and held to be intoxicating when eaten in quantity. It attains full size in 60 years; the people of Kangra consider it unlucky to employ it in house-building. It is a good avenue tree, is extensively cultivated for the sake of its dense foliage, and the leaves are considered the best and most nutritious of all fodder for cattle, particularly for milch cows. The oil from the kernels separates into two portions,—the one fluid, of a pale oil-green colour, and the other white, floccular, and of the

consistence of ghi.—*Madras Museum Report; Drs. Roxb., W. and A., Wight, Gibson, Brandis, M'Clelland, Voigt, and Cleghorn; Beddome.*

TERMINALIA BIALATA. *Wall.*

Pentaptera bialata, *Roxb.* | Lein-ben, ... BURM.

A large deciduous tree of the mountainous parts of India, with small greenish-yellow flowers, common in British Burma and the Andamans. A cubic foot weighs 39 lbs. In a full-grown tree on good soil, the average length of the trunk to the first branch is 80 feet, and average girth, measured at 6 feet from the ground, is 12 feet.—*Drs. Voigt, Brandis; Cal. Cat. Ex.*, 1862.

TERMINALIA CATAPPA. *Linn.*

T. Moluccana, *Lam.*
T. myrobalana, *Roth.*
T. subcordata, *Willde.*
T. intermedia, *Spr.*
Juglans catappa, *Lour.*

Indian almond tree, ENG.
Badam, ... HIND.
Catappa, ... MALAY.
Ada maram, . . MALEAL.
Ingudi, ... SANSK.
Nattu vadom, . . TAM.
Badama chettu, . TEL.

This large, beautiful tree, with small purplish-green flowers, grows in the Moluccas, in both Peninsulas of India, in all parts of the Dekhan, and Bengal. It attains a large size in Malabar, where the wood is said to be much esteemed. Europeans call it the Indian almond tree, with reference to the oval and flattened shape of its drupe. The kernel, however, is cylindrical; it is eaten, and is palatable, resembles the almond in taste and composition, and yields an excellent oil. It is raised easily from seed, and in a good light soil, well watered, will in two years be ten or more feet in height, and give blossom. Its large leaf turns red previous to falling off. Captain Beddome says that as it occurs in the forests of the Godavery, the wood is very strong. It makes a good avenue tree. The bark and leaves yield a black pigment, with which the natives colour their teeth and make into Indian ink; the juice of the leaves and milk of the nut are used medicinally. One species of the tasar silk-worms feeds on the leaves.—*Useful Plants; Drs. Roxb.* ii. p. 430, *Voigt, Gibson, Wight, Cleghorn, O'Sh.; Beddome, Fl. Sylv.*

TERMINALIA CHEBULA. *Retz.*

T. reticulata, *Roth.*

Aloluj aswad, . . ARAB.
Helij-i-Kābuli, . . ,,
Pang ah, ... BURM.
Pilla-marrada, . . CAN.
Alali mara, . . . ,,
Ho-li-leh, Ho-tsze, CHIN.
Hirda, Huldah, DUKH.
Hordah, ... GOND.
Har, Harbar, . . HIND.
Halela zard, . . . HIND.
Umbed'hur, . . . ,,
Kodorka maram, MALEAL.
Helileh-i-kalan, . . PERS.
Helileh-i-siah, . . ,,
Haritaka, . . . SANSK.
Aralu-gass, . . SINGH.
Kadukai, ... TEL.
Karaka, ... ,,

This tree grows in Ceylon, in both the Peninsulas of India, and northwards to Nepal, the Panjab, and Kābul, in Tenasserim, and in Canton province, and everywhere is a large tree. Colonel Beddome describes the wood as of good quality, and much used for building purposes; the heart-wood is yellowish-brown or dark-brown, hard and heavy, and makes good furniture, but is cross-grained and difficult to work. In Burma, yokes and canoes are made of it. The tender leaves, when scarcely unfolded, are punctured by an insect, and its eggs deposited therein, which by the extravasation of the sap become enlarged into hollow glands of various shapes and sizes, up to 1 inch in diameter; they are powerfully astringent, and make as good ink as oak galls; they also yield, mixed with alum, a good durable yellow dye. The fruit gives the black myrobalans, which are better than those of T. belerica; is an article of commerce for the large quantity of tannin which it contains. The fruit and gall-nuts are both used medicinally by the natives. Mr. Gamble says the bark is used for tanning and dyeing, and the unripe fruit is used for tanning, dyeing, and medicine, under the names balhar, zangi, and zangi har. 471,167 cwt. of myrobalans were exported from India in 1882-83, value Rs. 18,46,976; and Mr. Gamble says that in the southern circle of Bombay, the Forest Department in 1877-78, from the fruit of this tree, had a clear profit of Rs. 77,000. —*Drs. Royle, Cleghorn, Wight, M'Clelland, and Voigt; Mr. Gamble; Colonel Beddome; Thwaites; Powell*, p. 539.

TERMINALIA CITRINA. *Roxb.* ii. p. 435.

Myrobalanus citrina, *Gærtn.*

Huri tuki, . . . BENG.
Kyoo, ... BURM.
Haria, Harra, . . HIND.
Liba, ... SANSK.

A very large and tall timber tree of Assam and the Khassya Hills, and common in the Kotah jungles. The wood is very hard, and is not attacked by insects. It is of a grey colour, and is darker towards the centre, and in Assam is used for planks and general building purposes. Drupe oblong, lanceolate, about two inches long, two in circumference, obscurely five-grooved, dull orange-yellow, smooth; nut oblong, deeply five-grooved, one-celled. Fruit a gentle purgative; it is often made into a pickle, and is used as that of T. chebula. —*Irvine, Gen. Med. Top.; Voigt; Roxb.; O'Sh.*

TERMINALIA MYRIOCARPA. *H. and M.*

T. myriocarpa, *Kurz.*

Hollok, ... ASSAM.
Sunglok, ... LEP.
Pani-saj, ... NEP.

A very large evergreen tree of the Eastern Himalaya and Assam; growing also in the Darjeeling Terai. Heart-wood brown, beautifully mottled with dark streaks, and is used for building and tea-boxes, also burned for charcoal.—*Gamble.*

TERMINALIA PANICULATA. *W. and A.*

Pentaptera paniculata, *Roxb.* ii. p. 462.

Honal, Huluva, . . CAN.
Kindal, Kinjal, . MAHR.
Marwa, ... S. CAN.
Matti, Marda, . . TAM.
Pilla-marda, . . . TAM.
Pu-marda, ... ,,
Nee meeri, ... TEL.

A tree of Malabar, of the valleys of the Konkan rivers near their sources; abundant in the jungles south-east of Surat and at Courtallum, and rising in the forest mountain tracts up to 2000 or 3000 feet elevation. In S. Konkan it is common along the foot of the ghats. The timber is very good, but not equal to that of T. tomentosa; it is said to be improved by being kept under water.—*Colonel Beddome.*

TERMINALIA TOMENTOSA. *Roxb.*

T. alata, *Ainslie.*
T. coriacea, *W. and A.*
T. crenulata, *W. and A.*
T. glabra, *W. and A.*
Pentaptera coriacea, *Roxb.*
P. crenulata, *Roxb.*
P. glabra, *Roxb.*
P. tomentosa, *Roxb.*

Pia-sal? . . . . BENG.
Mutti, Karai mutti, CAN.
Asan, Saj, . . . HIND.
Ain, ... MAHR.
Koombook, . . SINGH.
Karra-marada, . . TAM.
Maddi, Nalla maddi, TEL.
Sahajo, . . . URIYA.

This is a very large timber tree, often 70 to 80 feet to the first branch. It grows in Ceylon, is common in Mysore and throughout the Madras Presidency, up to an elevation of 3000 or 3500 feet. It grows in the Godavery forests, rises very

straight on the Animallays, and very fine on the Nullamallays in the Kurnool district; also in the forests of the Bombay Presidency and the Central Provinces, in Oudh, and in all the Sub-Himalayan tract from the Ravi eastwards to Darjeeling.

The wood is dark-coloured, very hard, heavy, and strong. It is much used in house-building, and for boats and canoes, solid wheels of carts, furniture, and other purposes. The ashes from its burned bark produce a kind of potash, which is eaten by the natives with betel leaf; the bark is astringent, and used for dyeing black and for tanning.

Colonel Beddome says the T. glabra of Roxburgh only differs in being more glabrous and having the bark nearly smooth, but the pubescence varies much, and is called Tella-maddi by the Teling people, and he is inclined to believe that the Pentaptera crenulata, *Roxb.*, also is only a variety.

TERMITINÆ, a section of Neuropterous insects, in which Latreille includes the genera Mantispa, Raphadia, Termes, and Psocus. These genera, however, are usually regarded as constituting three distinct families. The Termitidæ family is distinguished by the following characters:—Wings with few transverse nervures, folding horizontally; tarsi four-jointed; antennæ short and moniliform; body depressed. See Termes.

TERNATE, on the west coast of Gillolo, is a high island, but of small extent, being only about six miles long. Fort Orange is in lat. 0° 49′ N., long. 127° 30′ E. Several of these islands—Ternate, Tidore, Motir, and Makian—are only cones standing on the same great fissures of the earth. The base of Ternate volcano is beneath the ocean. Its circumference around its shores is six miles, and its height is 5400 feet. Severe and destructive eruptions took place from it in 1608, 1635, 1653, 1673, after which the next was on the 26th February 1838, then on the 25th March 1839, on the 2d February 1840. In that of 1673, a considerable quantity of ashes was carried to Amboyna. In that of 2d February 1840, for fifteen hours the solid ground rolled like the sea, but the heaviest ground-wave was at 10 A.M. of the 15th February, and the people then took to their boats. In this interval, great eruptions of ashes and hot stones fell like hail. Lava poured from the crater into the sea. For ten days, clouds of black smoke poured out. About midnight of the 14th, the shocks were more violent, and before 3.30 A.M. every house was levelled. Fissures formed in the earth, out of which hot water rose for a moment, and then the earth closed again, to re-open at another place. Its population in 1865 was 9000.

The lower part of the mountain, behind the town, is covered with fruit trees, and hundreds of men, women, and children go daily to the mountain to bring in the fruit, durian, mango, lansat, and mangosteen. When Drake visited Ternate in A.D. 1579, the Portuguese had been driven out of the island by the sultan. Ternate with Batchian constitutes the ancient Moluccas. Milton sang of

> 'The isles
> Of Ternate and Tidore, whence merchants bring
> Their spicy drugs.'—*Par. Lost, Book II.*

The people are of three well-marked races, the Ternate Malay, the Orang Sirani, and the Dutch. The first are the descendants of the intruding Malay, who drove out the indigenes (who were no doubt the same as those of the adjacent mainland of Gillolo), and established a monarchy; their language is quite unintelligible. The Sirani are the Christian descendants of Portuguese.

Ternate town is at the foot of the mountains.—*Bikmore*, p. 306; *Wallace*, pp. 300-311.

TERNSTRÖMIACEÆ of De Candolle, the Theads, a natural order of plants, chiefly trees or shrubs, forming 28 genera, including 132 species, of which 57 occur in the East Indies, in Java, Ceylon, both the Peninsulas of India, the Khassya mountains, Assam, and Nepal, viz.:—1 Cochlospermum, 9 Ternströmia, 1 Anneslea, 1 Adinandra, 9 Eurya, 4 Cleyera, 12 Saurauja, 9 Gordonia, 7 Camellia, 1 Thea, 2 Schima, ? Pyrenaria, 1 Reinwardtia, Actinidia, Stachyurus. The tea plant, the most remarkable of this order, is a native of Assam.

TERNSTRÖMIA JAPONICA. *Thunb.*

T. gymnanthera, *W. and A.*
Cleyera gymnanthera, *W. and A.*

Shwui muh si, . . CHIN. | Kymone, NEILGHERRIES.

A common tree on the Neilgherries and other elevated mountains on the west side of the Madras Presidency, from an elevation of about 4000 feet upwards, also in Ceylon. The wood is pinkish in colour, and much esteemed; it works well, but requires to be well seasoned; it is used for doors, rafters, and a variety of purposes. Another species of this genus, T. Penangiana, *Choisy*, is an evergreen tree of the Andamans and Tenasserim; and under the Burmese name, Puzzeen zwa, Wallich noticed a large timber tree of Tavoy, used for building.—*Beddome, Fl. Sylv.* p. 91.

TERRA JAPONICA is an old trade misnomer, formerly applied to the catechu, and still retained for gambier, an inspissated vegetable juice obtained from the Uncaria gambir, *Roxb.*

TERRAPIN.

Shwui-kwei-kiah, . CHIN. | Pai-kwei-pan, . . CHIN.

See Reptiles; Tortoise.

TERRIBLES, a dangerous line of rocks and sunken reefs, 10 or 12 miles W. from the N. point of Ramree river. A lighthouse on the S. Terrible was proposed to be in lat. 19° 23′ 30″ N., and long. 93° 18′ E.

TERRIORE, a large tract of woodland country, about 30 miles north of Trichinopoly, held by a Reddi.

TERRY, EDWARD. His voyage to India was published in 1655. It gives an interesting account of Surat and S. Walley, and of Tom Coryates' travels in the east, and death at Surat in 1617.

TESTUDINIDÆ, a family of reptiles of the section A, Cataphracta or shielded reptiles, order Chelonia, and including the genera Testudo and Homopus. In the East Indies are T. elongata, T. Horsfieldii, T. Indica, T. platynotus, T. radiata, and T. stellata. They are land tortoises. See Reptiles; Tortoise.

TETRACEROS QUADRICORNIS. *Jerdon.*

Antilope chickara, *Hard.*
A. sub-quadricornutus, *Ell.*
T. striaticornis, *Leach.*
T. iodes, *Hodgson.*
T. paccerois, *Hodgson.*

Bhirul . . . of BHILS.	Chousingha, . . . HIND.
Kotri, Kuru of BUSTAR.	Chouka, Jangli bakra, ,,
Kond-guri, . . . CAN.	Bhekra, . . . MAHR.
Bhirkuru (male), GOND.	Bhirki, . . . SAUGOR.
Bhir (female), . . ,,	Konda-gori, . . . TEL.

The four-horned antelope is of the sub-family Antilopinæ. It is of uniform brownish-bay colour

above, beneath lighter. Its length is 40 to 42 inches, height at shoulders 24 to 26 inches, anterior horns up to 1½ inches, and posterior horns 4 to 5 inches. It frequents jungly hills and open glades in the forests, abounds in the Eastern Ghats, occurs at the foot of the Himalayas, is rare in Sind and the Western Panjab, and is unknown in the Malabar forest, Lower Bengal, valley of the Ganges, Ceylon, and Further India. The spurious horns are so small as rarely to be met with in adult individuals, and are situated on two osseous bumps or risings (strongly marked in the cranium), from which they seem to be easily detached. These osseous risings are immediately in front of the true horns, between the orbits, rather in front of a line drawn across the forehead through the centre of the eyes, and become covered with black callous skin after the loss of the corneous tips. The true horns are situated behind the eyes, or between the eyes and the ears, inclining backwards with a scarcely perceptible curve forwards, straight, parallel, round, smooth, thick, and strong at the base, which has a few wrinkles, and tapering to a point; their colour black. Those of very old males were 4¾ inches in length, and had three strong wrinkles, and one imperfect one at the base. The doe has no horns, nor any bony projection above the eyes. The mammæ are four in number. The colour is brown, of various shades, not bright, but sometimes so light as to approach a dull fawn, darker than the cervicapra, but not so bright and deep as in the gazelle. The shade is browner on the hind quarters, and darkest on the middle of the back. It becomes lighter on the sides till it passes gradually into white in the middle of the belly, without the well-defined dark line of separation observable in the other two species. The fore legs, particularly above the knee, the inside of the fetlocks, the nose, and edge of the ears, are very dark. A narrow line between the fore legs, which gradually widens towards the hinder flanks, the inside of the arms and thighs, is white, as is the inside of the ear, in which the hairs are long, and arranged in indistinct ridges. The lachrymatory sinus is long, narrow, and parallel with the line of the nose. In its habits it is monogamous, and is always found in pairs, frequenting the jungles among the undulating hills of the Mulnad. It is never found in the open country, or among the hills on the eastern side of the district, neither does it ever penetrate into the western forests. The droppings are always observed in heaps in particular spots. It is said to be fond of licking the salt efflorescence of the soil, from which habit, it is said, the incisors of old individuals are often found to be much worn, and sometimes wanting altogether.

TETRAGONIACEÆ, a natural order of plants, of which two species, Sesuvium repens and Tetragonia expansa, occur in the East Indies, Sesuvium repens along the sea-shores, and Tetragonia expansa, *Murray*, is the New Zealand spinach, a coast and inland plant of Australia, New Zealand, China, Japan; useful as a vegetable, also as a sand-binding plant.—*F. von Mueller.*

TETRAMELES NUDIFLORA. *R. Br.*

T. Grahamiana, *W. Ic.*; Anictoclea Grahamiana, *Nim.*

Sandugaza, . . . Beng. | Bolur, ... Can.
Thit-pouk, . . . Burm. |

This is a tree of Ceylon, the Western Ghats, Sikkim, Garo Hills, Burma, and Andamans. It is one of the largest trees in the Madras Presidency, is of gigantic growth, and often with very large buttresses; it is not uncommon throughout the western forests of the Peninsula from Bombay down to Cape Comorin, and also in Ceylon; it is very abundant about the foot of the Neilgherries on the western side, and in the dense forests in the plains of South Canara; it sheds its leaves early in January, and flowers when quite leafless in February. The timber is said to be soft and worthless.—*Beddome; Gamble.*

TETRANTHERA, a genus of plants belonging to the order Lauraceæ. T. Gardneri, *Thw.*, is a tree 40 to 50 feet high, of the Central Province of Ceylon, at an elevation of 4000 to 6000 feet. T. glaberrima, *Thw.*, a small Ceylon tree, growing at 4000 feet elevation. T. longifolia, T. ligustrina, T. itcodaphne, T. nemoralis, and T. ovalifolia of Ceylon, the last a tree 30 to 40 feet high, with T. Roxburghii of India and Ceylon, the Bo-mee-gass of the Singhalese. Wight also gives in Icones, T. glabrata, T. Panamanja. T. amara, *Nees*, is an evergreen tree of the Eastern Himalaya, Burma, and the Andamans, with a pale-brown wood. T. nitida, *Roxb.*, Kintonijam, Beng., name in the neighbourhood of Sylhet, where it is indigenous, and grows to be a useful timber tree of very great size. In the more remote forests which cover the Garo Hills, it is so large as to admit of being made into canoes of full 50 feet in length, for which purpose this tree is preferred.—*Voigt; Thwaites; Wight, Ic.; Roxb.* iii. p. 818.

TETRANTHERA CALOPHYLLA. *Miquel.*

Cylicodaphne sebifera, *Blume.*

Grows on the Neilgherries and on the Java mountains. A tallow-like fat is, in comparative abundance, pressed from the berries, and is used for the manufacture of candles. T. Japonica, *Spreng.*, and T. laurifolia, *Jacq.*, of tropical Asia, are similarly useful.

TETRANTHERA GLAUCA. *Wallich.* An evergreen tree of the Eastern Himalaya and Eastern Bengal. It is the Sempat of Nepal, the Diglilati of the Mechi, and the Diglotti of the Assamese.

TETRANTHERA MONOPETALA. *Roxb.*

Gwa, Harein, . . Bears. | Maida-lakri, . . Hind.
Buro kukur chettu, Beng. | Nara chettu, . . Tel.
Jungli rai am, . . Hind. | Nara mamidi, . . ,,

A middling-sized tree, native of the Peninsula of India, of Bengal, Oudh, the Siwalik, and Burma. Its cinnamon smelling leaves are given to silk-worms. The wood is used for agricultural implements. The bark is used in medicine, being considered stimulant, and after being bruised is applied fresh or dry to contusions, and sometimes mixed with milk or made into plaster. The leaves are used in Assam to feed the muga silk-worm, Antheræa Assama.—*J. L. Stewart; Gamble.*

TETRANTHERA POLYANTHA, *Wall.*, is a small tree of the Eastern Himalaya, Assam, and the Khassya Hills. In Assam, the leaves of this tree are used to feed the Antheræa Assama silk-worm, which produces the muga silk.

TETRANTHERA ROXBURGHII. *Nees.*

T. apetala, *Roxb., Corr.* | Sitsæa sebifera, *Pers.*
T. citrifolia, *Juss.* | Sebifera glutinosa, *Lour.*
Tomex sebifera, *Willde.* |

Kookoor chita, . Beng. | Boo-mee-gass, . Singh.
Meda lakri, . . . Hind. | Meda-sak, . . . Sutlej.
Maida-chob, . . ,, | Nara mamidi, . . Tel.
Chandna, . . . Panj. | Meda, ... ,,

This tree grows in China, in New Holland, throughout India, in Assam, the Panjab, Siwalik tract, the Salt Range, to 2500 feet. Bark mildly astringent, used by the hill people in diarrhœa. It is the meda lakri of Hindustani druggists, and a favourite application to bruises and wounds. It is somewhat fragrant, and slightly balsamic and sweet. Tetranthera Roxburghii is a variable plant. The fruit is globose, black, and about the size of a pea, yielding a kind of greasy exudation, from which the Chinese manufacture candles of a bad quality, and which serves as a basis for salves. —*Cat. Ex.*, 1862; *Thw. En. Pl. Zeyl.* p. 255; *O'Sh.*; *Eng. Cyc.*

TETRANTHERA WIGHTIANA. *Wall.*

Cylicodaphne Wightiana, *Nees, D.C.*

Var. α. T. tomentosa. Leaves densely fulvo or fusco-tomentose beneath.

Var. β. T. glabrescens. Leaves sparingly puberulous or glabrous beneath.

A handsome good-sized or large tree, common in many of the western forests from Canara to Cape Comorin, from about 2000 feet elevation up to about 8000; it is very abundant on the Neilgherries, where it is called Keynjee by the Badaga. The wood is yellowish, with a satiny appearance, and a darker heart; it is used for rafters and various other purposes.—*Beddome, Fl. Sylv.* p. 293.

TETRANYCHUS PAPAVERÆ, *Scott*, the poppy seed mite, swarms in poppy seed granaries and their store pots; it multiplies with great rapidity. This, with species of Bruchus, also Calandra sitana and tipula, are the insects of Lower Bengal which attack the poppy seed in the granaries.

TETRAONIDÆ, the grouse, partridge, and quail family of birds, comprising the Perdicinæ and Coturnicinæ. The family belongs to the order Rasores, the gallinaceous or game birds. Naturalists include in this family the grouse, the partridge, American partridges, quails, and guinea-fowl. The grouse are peculiar to the northern portions of both continents. Partridges are found in Europe, Asia, and Africa, disappearing in the Malayan Peninsula except in its extreme west. Quails have the same distribution as the true partridges, but have a tendency to accumulate in the south-eastern portion of the Malayan Peninsula, where, with Turnix of the Tinamidæ, they are the only tropical gallinaceous birds. The guinea-fowl are natives of Africa.

Sub-Fam. Tetraoninæ or true grouse, as yet not observed in India.

Sub-Fam. Perdicinæ or partridges; those occurring in India may be divided into snow cocks and snow partridges, peculiar to the highlands of Central Asia and the Himalaya; ordinary partridges, comprising the francolin and chukor; grey partridges, wood partridges, and bush quail; the true partridges represented by the grey partridge of Europe, with one species from Tibet, and the great group of African partridges.

1. *Snow Cocks and Snow Partridges.*

Tetraogallus Himalayensis, *Gray*, Himalayan snow cock.
T. Tibetanus, *Gould.*
Lerwa nivicola, *Hodgson*, the snow partridge.

II. *Partridges.*

a. Francolins or meadow partridges.

Francolinus vulgaris, *Stephens*, black partridge.
F. pictus, *Jard. and Selby*, painted partridge.
F. Phayrei, *Blyth*, Burma.

b. Rock or sand partridges.

Caccabis chukor, *Gray*, the chukor partridge.
Ammoperdix bonhami, *Gray*, the seesee partridge.
A. Hayi, *Gould*, Arabia.

c. Grey or bush partridges.

Ortygornis Ponticerianus, *Gmelin*, grey partridge.
O. gularis, *Temm.*, the kyah partridge.

d. Wood partridges.

Arboricola torqueola, *Valen.*, black-throated hill partridge.
A. rufogularis, *Blyth*, rufous-throated hill partridge.
A. atrogularis, *Blyth*, Tiperah, Chittagong.
A. intermedia, *Blyth*, Arakan.
A. brunneopectus, *Tickell*, Tenasserim.
A. sphenura, —? China.
Perdix personata, *Horsfield*, Java.
P. Javanica, *Gmelin*, Java.
P. Charltoni, —? Penang.
P. punctulata, *Gray.*
P. oculea, *Temm.*, Malay Peninsula.
P. thoracica, *Temm.*, Philippines.
Rollulus coronatus, —? Malay Peninsula.
R. niger.

e. Bush quails.

Perdicula Cambayensis, *Latham*, jungle bush quail.
P. Asiatica, *Latham*, rock bush quail.
P. erythrorynchа, *Sykes*, painted bush quail.

Sub-Fam. Coturnicinæ, Quails.

Coturnix communis, *Bonatere*, the large grey quail.
C. Coromandelica, *Gmelin*, black-breasted quail.
Excalfactoria Chinensis, *Linn.*, blue-breasted quail.
E. Novæ Guineæ, *Gm.*
E. Adamsoni, *Verreaux*, Celebes.
E. minima, *Gould*, Celebes.

Other of the quails are arranged by naturalists under the family Tinamidæ. Tetrao tetrix is the black-cock of Europe and Northern Asia. Mr. Atkinson, in the Altai, says black-cock shooting in September, when the first snow has fallen, is splendid sport. A common sledge, sometimes with one horse, at others with two, is prepared, and nearly filled with straw; upon this the sportsman sits down, and away the man drives into the forest, keeping a good look-out. When he sees the birds, he drives along till within rifle distance, and then stops. The sportsman must shoot the lowest bird; when this one drops, the others look down on their fallen mate, and remain quite still in the trees. I have more than once shot three out of the branches of the same tree, before the brood have taken flight. When the birds are going, the man gathers up the game, throws it into the sledge, and drives on again. In these woods it is not difficult to shoot from fifteen to twenty brace of black-cock in a day. This can only be done with a pea-rifle, which makes a very small report, and is certain in its effect.

The Himalayan snow cock, Tetraogallus Himalayensis, is the Jer monal of the N.W., but keeps to the open hill-sides, is harassed by the ring-tailed eagle, which never attacks it on the wing. It is 29 inches long, and weighs 6½ lbs. Eggs about the size of those of the turkey. T. Tibetanus is of the Snowy Range, and T. Caucasicus, *Pallas*, is of the Persian mountains.

The snow partridge, when rearing its young, if disturbed, exhibits all that distressful anxiety so common to its tribe. It does not counterfeit lameness like some, but walks away before the intruder, and calls out in the most plaintive manner, while the young squat close to the ground or creep beneath the stones.

The black partridge, Francolinus vulgaris, frequents grass meadows. Muhammadans of India compare its call to the words Subhan teri

kudrat, Show your power to-morrow! Others describe it as Lahsan, piaz, adrak, Garlic, onions, ginger! It is still abundant, though becoming scarcer.

Early in the morning the call of the male bird of the painted partridge may be heard to a great distance, Chee-kee-kerray, Chee-kee-kerray. The Chukor, HIND., or Atash khor, PERS., is the chukor partridge, Cacabis chukor of Jerdon, fabled by natives to be enamoured of the moon, and at full moon to eat fire. The two Persian words signify fire-eater. The chukor is common in all parts of the valley of the Indus, and throughout Tibet. In winter, when the hills are covered with snow, they are to be found in great numbers close to the rivers, even in the immediate neighbourhood of the villages; in general, when approached, they lie close among the crevices of the stones. Dr. Thomson was invited by the thannadar of Iskardo to be present at a hunting party, which he had arranged for the capture of the chukor, by surrounding a spot of ground, in which these birds are numerous, with a ring of men, who, approaching from all directions, gradually form a dense circle of perhaps a hundred yards in diameter. When the partridges are disturbed by a horseman in this enclosure, they can only fly towards the living wall by which they are surrounded. Loud shouts, and the beating of drums and waving of caps and cloaks, turn them back, and they are driven from side to side, till at last, exhausted with fatigue and stupid from the noise and confusion, they sink to the ground, and allow themselves to be caught by hand. The scene was a very striking one. The spot selected was a deep dell, full of rocks, but without trees. The sport, however, did not seem so successful as usual, six or eight birds only being captured. The hen of the chukor lays from 8 to 15 eggs. The grey partridge, Ortygornis Ponticeriana, is easily tamed, and will follow its owner about like a dog, even in the crowded streets. Muhammadans keep it in small cages, sometimes for fighting, as it is very pugnacious, and fights with great spirit and obstinacy. It readily utters its call, Pateela-pateela-pateela, when spoken to. It is used as a decoy for wild birds. The male bird of the covey, attracted by its call, is easily caught when fighting. The kyah partridge, Or. gularis, are found in wavy, thick grass, and in many places it can only be followed on elephants.—*Thomson's Travels*, p. 2; *Jerdon*.

TETRODON, fishes of the order Plectognathi. Instead of having distinct teeth as usual in the class, these have the jaws provided with a substance resembling ivory, formed somewhat like the beak of a bird, and fitted for crushing crustaceous animals and fuci, upon which they live. The Tetrodons are distinguished by the possession of four large teeth, the jaws being each divided by a central suture. These fishes are confined to the seas of warm climates; some of them, as also the Diodon, are called globe fishes. Species of Tetrodon are capable of inflating the abdomen, and in this state, when taken or handled, they emit a grating sound. They are also remarkable for tenacity of life, which they are capable of sustaining for several hours after having been taken out of their element. They have a peculiar, disagreeable odour, resembling that of Gobioidæ, which continues for several years in specimens preserved in spirits of wine. In the Malayan countries they are considered highly poisonous, and are even objected to as manure. Tetrodon skins are made into lanterns in China.—*Eng. Cyc.*

TEUCRIUM, a genus of unimportant plants of the natural order Labiatæ, of which T. botrys, T. leucosceptrum, and T. stoloniferum occur in the East Indies. T. chamædrys of Europe and some parts of Asia, is an ingredient in the celebrated Theriaca andromachi, or tareaq farooq. The species are pleasantly fragrant. T. monostachyum, *Wallich*, of the Eastern Himalaya, Sylhet, and Khassya Hills, ascends to 7000 feet; coppices well. —*O'Sh.* p. 488; *Voigt*, p. 463.

TEUTHIS. *Linn.* All the species of these mollusca are supposed by the Malays of the Straits to be highly poisonous; they are not eaten, but set aside among offal of fish to be used as manure.

TEWARI is a corruption of Trivedi, and is the tribal title of Brahmans of N. India descended from men learned in their Vedas. They follow agriculture, are soldiers, cudgel-players, and boxers; many of them entered the Indian army.

TEXEIRA, a Spanish author, who translated, as the History of Persia, the first part of Mir Kond's great book in seven volumes, called Rauzat-us-safa. Texeira extracted thence his history, which he presented to the world in Spanish; but it has been since translated into French by Cotolendi. Texeira had travelled into Persia, and made himself acquainted with the language of that country. He finished his first part with an Abridgment of the History of the Khalifs, etc.

TEXTILE ARTS. The east has, from the earliest times of which we have any record, been famous for its textile fabrics; and India, notwithstanding the great mechanical inventions of the western world, is still able to produce her webs of woven air, which a manufacturer of the 18th century attempted to depreciate by calling them the shadow of a commodity, at the same time that his townsmen were doing all they could to imitate the reality, and which they have not yet been able to excel. Though the invention and completion of a loom for weaving would indicate a high degree of ingenuity as well as a considerable advance in some other arts, the Hindus were acquainted with it at a very early period, for in the hymns of the Rig Veda, composed about 1200 years B.C., weavers' threads are alluded to; and in the Institutes of Menu it is directed,—'Let a weaver who has received ten bales of cotton thread, give them back increased to eleven by the rice-water and the like used in weaving.'

That cotton was employed at very early periods, is also evident from the Indian name of cotton, Karpas, occurring in the Book of Esther, i. 6, in the account of the hangings in the court of the Persian palace at Shushan, on the occasion of the great feast given by Ahasuerus, — white, green, and blue hangings; the word corresponding to green is Karpas in the Hebrew. It seems to mean cotton cloth made into curtains, which were striped white and blue. Such may be seen throughout India in the present day, in the form of what are called purdahs. (Vide Essay on Antiquity of Hindu Medicine, p. 145.) The mode in which these are used, and the employment of the same colours in stripes, is still known as Shatranji, or cotton carpets. That the Hindus were in the habit of spinning threads of different materials, appears from another part of

the Institutes of the same lawgiver, where it is directed that the sacrificial threads of a Brahman must be made of cotton, that of a Kshatriya (second caste) of sana (Crotalaria juncea), and that of a Vaisya of woollen thread. The natives of India prepare fabrics not only of cotton, but also of hemp and of jute and other substitutes for flax; also of a variety of silks, and the wool of the sheep, goat, and camel, as well as mixed fabrics of different kinds. But it is for the delicacy of the muslins, especially of those woven at Dacca, that India was so long famous. From a careful examination of the cottons grown in different parts of India, as well as of those of other parts of the world, we find that it is not owing to any excellence in the raw material that the superiority in the manufacture was due, for English spinners say that the Indian cotton is little fit for their purposes, being not only short but coarse in staple. It is owing, therefore, to the infinite care bestowed by the native spinners and weavers on every part of their work, that the beauty of the fabric is due, aided as they are by that matchless delicacy of touch for which the Hindus have long been famous. According to one of their authors, 'the first, the best, and most perfect of instruments is the human hand.' The Hindu weaver has been described as hanging his loom to a tree, and sitting with his feet on the ground. But this is the case only with the coarser fabrics; and a late resident of Dacca has given a minute account of the cotton manufacture of that district, and has shown that great care is bestowed on every part of the process. The spinning-wheel is usually considered to be an improvement upon the distaff and spindle, as modern machinery is upon the inexpensive spinning-wheel. In facilitating work and diminishing expense, the spinning-wheel was no doubt a great improvement, and is still employed throughout India for the ordinary and coarser fabrics. But the spindle still holds its place in the hands of the Hindu women, when employed in spinning thread for the fine and delicate muslins to which the names of Shabnam or Dew of Night, Ab-i-Rawan or Running-water, etc., are applied by natives, and which no doubt formed the Tela ventosa of the ancients; and those called Gangitika in the time of Arrian were probably produced in the same locality. Mr. James Taylor, of the Bengal Medical Service, in a report which was sent by the Court of Directors to India, gave much interesting information respecting the cotton manufacture of Dacca. He showed that the Hindu woman first cards her cotton with the jaw-bone of the boalee fish, which is a species of Silurus; she then separates the seeds by means of a small iron roller worked backwards and forwards upon a flat board. A small bow is used for bringing it to the state of a downy fleece, which is made up into small rolls to be held in the hand during the process of spinning. The apparatus required for this consists of a delicate iron spindle, having a small ball of clay attached to it, in order to give it sufficient weight in turning; and imbedded in a little clay there is a piece of hard shell, on which the spindle turns with the least degree of friction. A moist air and a temperature of 80° is found best suited to this fine spinning, and it is therefore practised early in the mornings and in the evening, sometimes over a shallow vessel of water, the evaporation from which imparts the necessary degree of moisture. The spinners of yarn for the Chundeyree muslins in the dry climate of North-Western India are described as working in underground workshops, on account of the greater uniformity in the moisture of the atmosphere. The Indian spinning-wheel is looked upon with contempt by those who look to the polish rather than to the fitness of a tool. Professor Cowper, than whom none was a better judge, observing that the wood-work of some of these spinning-wheels was richly carved, inferred that the strings with which the circumference was formed might have some use, and not have been adopted from poverty or from idleness. In making working models of these instruments, he has found that in no other way could he produce such satisfactory results as by closely imitating the models before him, the strings giving both tension and elasticity to the instrument. The spindles, moreover, being slightly bent or the hand held obliquely, the yarn at every turn of the spindle slips off the end and becomes twisted. The common dimensions of a piece of Dacca muslin are twenty yards in length by one in breadth. There are more threads in the warp than in the woof, the latter being to the former in a piece of muslin weighing twenty tolas or siccas, in the proportion of 9 to 11; one end of the warp is generally fringed, sometimes both. The value of a piece of plain muslin is estimated by its length and the number of threads in the warp, compared with its weight. The greater the length and number of threads, and the less the weight of the piece, the higher is its price. It is seldom, however, that a web is formed entirely of the finest thread which it is possible to spin. The local committee of Dacca having given notice that they would award prizes for the best piece of muslin which could be woven in time for the 1851 Exhibition, the prize of 25 rupees was awarded to Hubeeb Oollah, weaver of Golconda, near Dacca. The piece was ten yards long and one wide, weighed only 3 oz. 2 dwts., and might be passed through a very small ring. Though the cotton manufactures of India seem to have greatly fallen off, from the cheapness of English manufactured goods, the report of the Revenue Board, Madras, shows that up to the year 1871 weavers continued to increase in numbers. In the year 1850, it was stated by Dr. Taylor that, as the finest muslins formed but a small portion of goods formerly exported to England, the decay of the Dacca trade has had comparatively little influence on this manufacture, as these delicate manufactures still maintain their celebrity in the country, and are still considered worthy of being included among the most acceptable gifts that can be offered to her native princes; and he believes that the muslin being then made was superior to the manufacture of 1790, and fully equal to that of the reign of Aurangzeb. Fine muslins have been sent to the Exhibitions in Europe, from Dacca, from Kishengarh in Bengal, from Collar, in the raja of Travancore's dominions, as well as from Chundeyree in the Gwalior territories. Specimens of almost every variety of the cotton manufacture, such as the coarse garrha and guzzee for packing, clothing, and for covering corpses, with dosootee, etc., for tents, canvas for sails, towels, and table-cloths, and every variety of calico, were sent from Nepal and Assam, as well as from along the valley of the Ganges, from

Bengal up to the Jullundhur Doab, in the Sikh territories; also from Cutch, Ahmadabad, Surat, and Dharwar on the western side of India; from the central territories of the Nizam, from Nagpur, and from the islands of the Indian Ocean. Fine pieces of calico and punjum longcloth were sent from Juggiapettah, in the Northern Circars, which was formerly the great seat of this manufacture. Some of the places noted for their manufactures did not grow their own cotton. Dacca no doubt grew most of what it required for its muslins, because the thread did not swell in bleaching, but it also imported cotton formerly from Surat, as well as from Central India. Azimgarh imports its cotton chiefly from the same source to which the Northern Circars was also formerly indebted, while Chundeyree imports its cotton from the distant valley of Nimār. The natives are acquainted with every kind of weaving, from guzzee and gauze, to striped, checkered, and flowered muslins. The last are a branch of art which has been long known in the east, and the mode of making which often puzzled weavers in Great Britain. In manufacturing figured (jamdanee) fabrics, Mr. Taylor informs us, they place the pattern, drawn upon paper, below the warp, and range along the track of the woof a number of cut threads, equal to the flowers or parts of the design intended to be made; and then, with two small, fine-pointed bamboo sticks, they draw each of these threads between as many threads of the warp as may be equal to the width of the figure which is to be formed. When all the threads have been brought between the warp, they are drawn close by a stroke of the ley. The shuttle is then passed, by one of the weavers, through the shed, and the weft having been driven home, it is returned by the other weavers. Most of these flowered muslins are unform in colour, but some are in two colours, and chiefly woven in Bengal. Specimens of double weaving in cotton, and showing considerable skill, with a pleasing arrangement of pattern and colours, were sent from Khyrpur, in Sind. These kinds are also woven in Ganjam. — *Royle on the Arts and Manufactures of India*, p. 487.

TEYAMMUM. Arab., Hind., Pers. The Muhammadan legal purification with sand, where water is not obtainable. See Bathing; Lustrations.

TEYNGA, in lat. 6° 52′ N., long. 121° 43′ E., is a small low island of the Philippine group, covered with trees, and is the most northern island of the Sulu Archipelago.

TE-YUH. Chin. Earth's prison. Teen-tang, the heavenly paradise. These correspond to hell and heaven.

TEZAB. Hind., Pers. Acid, lit. biting water.

Gandhak ka-tezab, sulphuric acid.
Nimak ka-tezab, hydrochloric acid.
Shore ka-tezab, nitric acid.
Sirke-ka-tezab, acetic acid, vinegar.

TEZBAL. Hind. Leaves of Xanthoxylon hostile, also of Cinnamomum albiflorum.

TEZIN, a river which rises in the Safed Koh, and after a course of 40 miles falls into the Kābul river at Tarobi. On the 22d October 1841, Brigadier Sale defeated here a body of hostile Afghans. But there fell here, on the 11th January 1842, the remnant of a British force retreating from Kābul, consisting of 4500 men, including followers (out of a total of 16,500 who had left Kābul a few days before). On the 12th and 13th September 1842, General Pollock while advancing was attacked by Afghans here, and repulsed them. —*MacGregor*, pp. 709, 710.

TEZKIRAH. Arab. A passport; also brief notices of men or things.

TEZPUR, a town in the Durrung district of Lower Assam. Copperplates were found here of supposed date the 10th century, with inscriptions in slightly modified Kutila character. They have invocations to Siva and the Brahmaputra river, and mentioning the boar incarnation and his descendants, also Vishnu, Krishna, and Lakshmi. This inscription records the grant of a village called Abisuravataka, on the west of the Ganges, to a Brahman of the Sandilya race, named Indoka. The donor is Vanamala of the dynasty of Bhagadatta.

THAB BAN. Burm. This Amherst timber is used for boat-building and making carts; timber sometimes 70 feet long. It is a teak, but rather heavier than the usual kind; sp. gr. 0·814.—*Cat. Ex.*, 1851; *Mr. Blundell.*

THA-BEIT. Burm. The alms-bowl of Buddha. See Kasgal-i-Ali; Patra.

THA-BY-KE or Tha-bay-kya. Burm. Described as a kind of oak growing in Amherst, Tavoy, and Mergui, not abundant, but scattered in all forests inland throughout the provinces; of max. girth 1½ cubits, and max. length 16 feet. When seasoned, it floats in water. It is a sufficiently light, yet durable, straight-grained, tough wood; used by Burmese for posts, building purposes generally, and various other objects; likely to prove excellent for helves, and would be unrivalled for shot boxes.—*Captain Dance.*

THADKI. Mahr. With the Mahrattas, a cenotaph of altar-like platform. It supports sometimes a stand for the sacred basil (tulsi-vrindawan), sometimes two feet (padma) in relief; others the linga. These are sometimes protected by a canopy. An instance of the latter is the thadki of the famous Ragonath Rao Bhat (Raghoba Dada), the father of the last Peshwa, whose ashes lie at Hingani, 3 miles up the Ganga from Kopargaon.

THAKUR. An idol, a deity. In Gujerat, a name of the idol Balaji; an individual entitled to reverence or respect. A title applied to the nobles of Rajputana, from Thakura, Sansk., honourable. Thakurani, a lady of rank, from Thakara, a lord. The title is applicable alike to Brahman and Rajput tribes. Thakurbari, Hind., or Thakurwari, also Thakurghar, Hindu place of worship, an idol house; lit. the Lord's house. See Saligramma.

THAL. Hind. A desert, sandy tract. See Thul.

THALA. Hind. A large flat metallic dish.

THALAITI or Talaiti is the term applied to the town at the foot of every hill fortress.

THALAMITA, a tribe of crustacea.

1. *Sub Gen.* Thalamitæ quadrilaterales.

Thalamita admete, *Edw.*, Red Sea, Indian Ocean.
T. chaptain, *Edw.*, Red Sea.
T. crenata, *Edw.*, Asiatic Seas.
T. prymna, *Edw.*, Australia.

2. *Sub-Gen.* Thalamitæ hexagonales.

Thalamita crucifera, *Edw.*, Indian Ocean.
T. annulata, *Edw.*, Red Sea, Indian Ocean.
T. natator, *Edw.*, Indian Ocean.
T. truncata, *Edw.*, Indian Ocean.
T. cullianassa, *Edw.*, Indian Ocean.
T. erythrodactyla, *Edw.*, Australia.

THALASSINA SCORPIONIDES, the burrowing lobster of the Fiji Islands; so named from its scorpion-like tail.—*Hartwig.*

THALESAP, a lake on the north of Cambodia, 60 miles in circumference.

THALGHAT or Kasaraghat, a pass in the Syhadri Hills, in the Thana (Tanna) district of Bombay, situated in lat. 19° 43′ N., and long. 73° 30′ E., 65 miles north-east by north of Bombay city. The railway there is the north-eastern branch of the Great Indian Peninsula Railway.—*Imp. Gaz.*

THALICTRUM FOLIOLOSUM. *D. C.*

Meadow rue, . . ENG.	Shuprak, ... HIND.
Pili jari, ... HIND.	Burmoti, . . . PANJAB.
Mamiran, Momira, ,,	

This is found in the Sutlej valley between Rampur and Sungnam, at an elevation of 5000 to 8000 feet; at Mussoori, and generally on the Himalayas. The Makhzan-ul-Adwiah describes three kinds of mamiran, viz. Hindi, blackish-yellow in colour; Chini, dull-yellow; and Khorasani, dark-greenish.

Th. flavum is termed in France and England 'the poor man's rhubarb,' as a substitute for which medicine it is generally employed. The bitter root of the Indian species, in doses of 5 to 10 grains, acts as a tonic and aperient, and is given in the interval of intermittent fevers, and in convalescence from acute diseases. It promises to succeed well as a febrifuge of some power, and an aperient of peculiar value.—*O'Sh.; Cleghorn; Voigt; Powell.*

THALICTRUM RUBELLUM. *Smith.* Shingma, CHIN., grows in the Chinese provinces of Sze-chuen, Shan-si, and Kan-su. The root-stocks are used medicinally.—*Smith.*

THALLOGENS, a class of plants proposed by Lindley to include those flowerless plants which are distinguished by the absence of an axial stem. It includes all the Cryptogamia, with the exception of ferns and mosses.

Those of the E. Indies comprise the natural orders Confervaceæ, Fucaceæ, Ceramiaceæ, and Hymenomycetes, with the following genera:—

Confervaceæ, Confervids—	Ceramiaceæ, Rose tangles—
ulva.	callithamnion
porphyra.	ceramium.
Fucaceæ, Sea Wracks—	chondrus.
cargassum. | dictyota.	rhodymenia.
fucus. | chordaria.	Hymenomycetes, Toad-stools—
laminaria. | bryopsis.	Agaricus.
zonaria. | codium.	

THAMAS KOULI KHAN, son of a shepherd of Khorasan, known to the world by his title of Nadir Shah.

THAM KHUAN. SIAM. Certain imposing ceremonies which mark the principal events or eras in the life of a Siamese, such as the shaving his head-tuft, his reception as a bonze, his marriage, the advent of a new sovereign, etc.—*Bowring, Siam*, i. p. 117.

THAMMAI. BURM. A tree native of Amherst; a strong, handsome wood, like Ægiceras, or box-wood.—*Cat. Ex.*, 1862.

THAMNOCALAMUS FALCONERI. *Hooker.* A bamboo growing at 8000 feet elevation in Kamaon and Nepal. Th. spathiflorus, *Munro*, is the small bamboo in the Himalaya from the Sutlej to Bhutan, at 8000 feet.

THAMUD and AD, two tribes of ancient Arabia before the time of Abraham. They are said to have been of gigantic stature.—*Catafago.*

THAN. HIND. A piece of cloth, a web of cloth.

THAN, a village in Kattyawar, to the north of the road from Wadhwan to Rajkot, 12 or 14 miles N.W. of Muli. It is one of the most ancient places in India, and the whole of the neighbourhood is holy ground. It is situated in the part of Surashtra known as the Deva Panchal,—so called, it is said, from having been the native country of Draupadi, the wife of the five Pandava brethren. One of the chapters of the Skanda Purana is devoted to Trineteswara and the neighbourhood. Population, 250,000 souls. Than was visited also by Krishna and his consort Lakshmi, who bathed in the two tanks near the town, whence one has been called Pritam, a contraction from Priyatam, 'the beloved,' after Krishna, so named as being the beloved of the Gopi; and the other Kamala, after Lakshmi. Within a few miles was the shrine of the three-eyed god Trineteswara, one of the appellations of Siva; and close to this, the celebrated kund, by bathing in which pool all sins are washed away. This kund was called therefore the Papnasnu or 'sin-expelling,' as the forest in which it was situated was called the Papapnodnuvana, or the Forest of the Sin-destroyer. Close to Than are the Mandhar Hills, distinguished by this name from the rest of the Tanga range.—*Imp. Gaz.*

THANA or Tanna, chief town of Thana district, Bombay, and a station on the Great Indian Peninsula Railway, 20 miles north-east of Bombay city; lies in lat. 19° 11′ 30″ N., and long. 73° 1′ 30″ E., and contains (1872) a population of 14,299.

Thana or Tanna district, lying between lat. 18° 47′ and 20° 23′ N., and between long. 72° 39′ and 73° 52′ E. Area, 4243 square miles; population (1881), 110,707 persons,—78,582 Hindus, 17,058 Musalman, 542 Jains, 1269 Parsees, 12,689 Christians, and 572 others. The Christians of Salsette and Bassein (about 35,000) are the descendants of the converts of St. Francis Xavier and his successors in the 16th century. The original converts were not obliged to give up caste distinctions, and their descendants have retained many of them, and a Thana Christian can still tell to what caste his family belonged before conversion. Indeed, Christians of the Bhandari, Kumbi, and Koli castes commonly call themselves Christian Bhandari, Kumbi, or Koli, as the case may be; and Christians belonging to different castes do not, as a rule, intermarry, though the restriction in this respect is not so rigid as among Hindus. All of them have Portuguese names, and show their attachment to the Christian religion by contributing very largely to their churches, and to the support of their priests. All Christian villages on the coast, and a good number inland, have their churches; and where a congregation is not large enough to keep a resident priest, one priest serves two or three churches. They live by cultivation, fishing, toddy-drawing, and every other employment open to similar classes of Hindus.—*Imp. Gaz.*

THANAH. HIND. A police station, a military post.

THA-NAT-KHA. BURM. A fragrant yellowish-coloured cosmetic made from the root and bark of the Murraya exotica and M. paniculata.

THA-NAT-THEE. Burm. A timber tree of Amherst, Tavoy, and Mergui, said to be abundant all over the provinces; of max. girth 3¼ cubits, and max. length 30 feet. When seasoned, it floats in water. It is a durable, yet light wood, with a very straight grain, and is used for every purpose by the Burmese.—*Captain Dance.*

THANESWAR, a sacred town and place of Hindu pilgrimage in the Umballa district of the Panjab, situated on the bank of the river Saraswati (Sarsuti), in lat. 29° 58′ 30″ N., and long. 76° 52′ E., 25 miles south of Umballa. Population (1868), 7929.

Thaneswar or Sthaneswara is said to be derived either from the Sthana or abode of Iswara, or from the junction of his names of Sthanu and Iswara, or from Sthanu and Sar, a lake. The town is one of the oldest and most celebrated places in India, but the earliest certain notice of it under this name is by the Chinese pilgrim Hiwen Thsang, in A.D. 634, although it is most probably mentioned by Ptolemy as Batan-ka-isara, for which we should perhaps read Satan-aisara for the Sanskrit Sthaneswara. But the place was more famous for its connection with the history of the Pandus, than for its possession of a temple of Mahadeva, whose worship, in India at least, must be of much later date than the heroes of the Mahabharata. All the country immediately around Thaneswar, between the Saraswati and Drishadwati rivers, is known by the name of Kuru-kshetra, that is, the 'field or land of Kuru,' who is said to have become an ascetic on the bank of the great holy lake to the south of the town. This lake is called by various names, as Brahma-sar, Ramahrad, Vaya, or Vayava-sar, and Pavana-sar. The first name is attributed to Brahma, because he performed a sacrifice on its banks. The second name is derived from Parasu Rama, who is said to have spilt the blood of the Kshatriyas in this place. The last two titles are derived from the names of the god of Wind, on account of the pleasant breezes which blew over the waters of the lake during Kuru's period of asceticism. This lake is the centre of attraction for most pilgrims; but all around it for many miles is holy ground, and the number of holy places connected with the Kaurava and Pandava, and with other heroes of antiquity, is very great indeed; but the list given in the Kuru-kshetra Mahatyma is limited to 180 places, of which one-half, or 91, are to the north along the line of the venerated Saraswati river.

Puranic legends attribute to it an antiquity long anterior even to the Pandus themselves. On its banks, Kuru, the common ancestor of the Kaurava and Pandava, sat in ascetic abstraction; here Parasu Rama slew the Kshatriyas, and here Pururavas, having lost the nymph Urvasi, at length met his celestial bride at Kuru-kshetra, 'sporting with four other nymphs of heaven in a lake beautiful with lotuses.' And a story of the horse-headed Dadhyanch or Dadhicha is perhaps even older than the legend of Pururavas, as is alluded to in the Rig Veda: 'With his bones Indra slew ninety times nine Vritras.' In A.D. 1011, its temple was sacked by Mahmud.

The sacred lake, a pool of the Saraswati (Sarsuti), forms an oblong sheet of water, 3546 feet in length and 1900 feet in breadth. During eclipses of the moon, the waters of all other tanks are believed to visit this tank at Thaneswar; so that he who then bathes in the assembled water, obtains the consecrated merit of all possible ablutions. The country for many miles around is holy ground, and popular estimate sets down the number of sacred sites connected with the Kaurava and Pandava at 360. At all seasons of the year, a continuous stream of pilgrims pours towards the shrines of Thaneswar and the Kuru-kshetra. The number of visitors at the great festival formerly amounted to 500,000, but had dwindled away in 1872 to 30,000.—*Beng. As. Soc. Journ.* xxii. p. 673; *Cunningham's Geog. India*, pp. 330, 335.

THANNA. Hind. Custom-house, a police station. Thannadar, the chief of police of a station.

THANNA-DAN. Burm. A fruit tree of Amherst. It has a reddish-brown, heavy wood, fit for machinery or other purposes requiring great strength. It is exempt from attacks of insects, but somewhat liable to split.—*Cat. Ex.*, 1851.

THAN-THAT, an Amherst capital wood, used for stocks of various instruments.—*Cat. Ex.*, 1851.

THAN-THAT. Burm. Found inland up the Gyne and Attaran rivers in the Tenasserim Provinces. When seasoned, it floats in water. It is a capital wood, very durable; used by Karens for bows, for shoulder yokes, spear-handles, etc. Excellent for hammer-handles from its tough fibre.—*Captain Dance.*

THAORI. The Choora and Thaori were early in the nineteenth century in castes of robbers; the former from the Lakhi jungle, the latter from Mewar. Most of the chieftains had a few in their pay, entertained for the most desperate services. The Bahaderan chief had expelled all his Rajputs, and retained only Choora and Thaori. The Choora were highly esteemed for fidelity, and the barriers and portals throughout this tract were in their custody. They enjoyed a very singular perquisite, which would go far to prove their being the aborigines of the country, namely, a fee of four copper coins on every dead subject, when the funeral ceremonies are over.

THAR. Arab. The blood revenge.—*Burton's Pilgrimage*, i. p. 346.

THAR, a typical Nemorhœdus. It much resembles N. bubalina in colour, as well as by its short caprine tail, harsh adpressed hair, and vigorous make, suited to climbing lofty mountains. But the Thar is in structure as much more antelopine as the Takin is more bovine. The Takin is not much, if it all, inferior in size or bulk to the female yak; and, as seen from the front especially, with its lunate horns displayed and its short tail concealed, it would be at once pronounced to belong to the ox kind, close examination alone being likely to suggest any doubts on that head. Its massive form and peculiar proportions are quite bovine.

THAR, the forest goat, is the Nepal name of Nemorhœdus bubalina, called Kamu and Ramu on the Sutlej and Kashmir, and Serow in the hills generally. The other Nemorhœdus, N. goral, is the Gooral, or Himalayan chamois.

THAR and Parkar, a British district in the east of Sind, lying between lat. 24° 13′ and 26° 15′ N., and between long. 68° 51′ and 71° 8′ E. Area, 12,729 square miles; population (1872), 180,761,

or 14 to the square mile. It is bounded on the north by Khairpur state; on the east by the states of Jeysulmir, Malani, Jodhpur, and Palanpur; on the south by the Runn of Cutch; and on the west by Hyderabad. The Pat, or plain, its western part, rises 50 to 100 feet above the Sind plain. The Thar or desert portion consists of a tract of sandhills, which present the appearance of waves running north-east and south-west, and are composed of a fine sand. S.E. of the Thar is the Parkar tract. The peninsula of Parkar in its extreme S.E. juts into the Runn of Cutch. It is level, except in the immediate vicinity of the town of Nagar Parkar, where there are the Karunjhar Hills, composed mostly of syenite rock. It has hilly rocky ranges rising 350 feet above the surrounding level. There are sandhills also in this portion of the district; but towards the east they merge into a large open plain of stiff clay, through which, in places, limestone occasionally crops out.

The number of Musalman is returned as 96,604, and of Hindus, 62,500; the Christian community numbers 35; and Koli, Mengwar, Rahtor, and others, 21,622. The Soda tribe, formerly dominant in Thar and Parkar, are of Rajput origin, and martial in character. The Khosa are fine, robust, martial men, inured to fatigue and hard fare. They are brave and enterprising, but improvident. The Udejas came originally from Sind; they are a fine, athletic race, well-behaved, and have turned their attention to agricultural pursuits. The Bhils rank very low in the social scale, and are much addicted to theft. The language is a mixture of Sindi and Kachi; formerly, when Thar and Parkar was under the administration of the Political Agent at Cutch, all written correspondence was carried on in the Gujerati language.

Travelling in the Thar or desert portion of the district is very tedious and difficult, owing to the sandhills which have constantly to be crossed. The climate of Thar and Parkar is somewhat similar to that of Cutch (Kach), and is subject to great variations of temperature, being excessively hot in the summer, and very cold in the winter, the cold increasing as the sandhills are approached.

Snakes are very common, especially in the hot season. The wild hog, black partridge, and water-fowl are only met with in the Nara tract. The gor-khar or wild ass frequents the Parkar, and the hyæna and lynx, the Thar. The desert ponies are hardy and well made. Camels and horned cattle are bred extensively in the desert; large herds of the latter are annually driven to Gujerat for sale. Thareli, a dialect of Sindi, is spoken in the desert.—*Imp. Gaz.*

THARPANA. Sansk. Amongst the Hindu races, a water oblation, an oblation offered to the gods before eating, and an oblation in honour of the dead. Hindus, at the time of bathing, present water daily to the gods, to the sages, to the yaksha, naga, gandharva, apsarases, asura, vidyadhara, pishacha, siddha, and to their deceased ancestors. The tharpana should be performed three times a day. Brahmans wash the whole body before eating; the Kshatriya, Vaisya, and Sudra, only the hands and feet; they then assume the yellow silk wrapper, which covers them from the waist downwards, and is the sole article of dress worn at meals. In Gujerat, each person has a small oblong wooden stool to sit upon, and the food is placed on a similar stool or short-legged table. The vessels used are brass or copper, —a flat, round dish, containing bread and preserves, or condiments, and two or three cups of pottage and vegetables. The water-vessel, of silver or brass, with a small drinking cup set upon it, stands on one side. The second course is composed of rice and curds, or similar food. On great occasions, however, the fare is more varied and costly. Ablutions after meals are confined to the hands and face.

For the first meal the men of the family eat at the same table, then the women clean the same vessels, and use them for their own breakfast. The servants take their food after the family breakfast is finished, and they use different vessels. The men chew betel-nut after meals. They strive to avoid incurring defilement from the touch of a person of lower caste. Such pollution, however, when it occurs, is remediable by the use of 'panch gavya,' or the five articles derived from the cow, and by fasting for the remainder of the day. The second meal, which is a lighter one, is eaten at about eight in the evening.

A Brahman traveller preparing for dinner makes a 'choko,' the floor of which he spreads with cow-dung and earth, moistened with water. When at home, his own 'rusodo' or cooking-room is the place employed; but if necessary, the choko may be made under the shade of a hedge by the wayside, or in any other convenient place. Upon the choko he raises a little temporary stone, which he smears in like manner with cow-dung, and thereupon he cooks his food. The Purbeea, or eastern Brahmans, carry their exclusive notions upon this point to such a length, that brothers even are forbidden to use the same choko, nor may one take fire from the stone of another. Hence the saying, 'Twelve Purbeea and thirteen choko,' because with that number of Brahmans an extra stone would be required for the fire alone.

The Brahman, when his food is ready, before eating, performs the tharpana; that is to say, he fills a copper cup with water, and puts therein a few grains of barley, some sesamum, leaves of the sacred basil tree, sandal, etc.; then, holding some sacrificial grass, he fills his joined hands with water, which he pours back again into the cup, saying, 'I offer (make tharpan of) this water to all the Dev.' He proceeds to make similar offerings of water to men, animals, trees, rivers, seas, to the bhoot, pret, rishi, progenitors, and others. Then he mentions the names, as many as he can recollect, of his father's ancestors, his mother's ancestors, and his own deceased friends. He now performs the homa, or fire-sacrifice, by throwing a portion of rice and clarified butter into a little copper or earthen vessel containing fire, repeating, while so employed, the names of the Deva. The Brahman sets aside five portions of food, for cows, beggars, dogs, ants, and sparrows. He then takes a little of each dish, and offers it to the Deo, in a vessel containing five divisions. He now sits down to his breakfast; but before commencing repeats the gayatri over a handful of water, with which he sprinkles his own food, and three portions which he sets apart for Brahma, Vishnu, and Siva. The

first five mouthfuls he swallows are for the 'Panchpran,' or five airs supposed to be in the body and necessary to existence. At the conclusion of his repast, he deposits upon the ground a little of what remains, as an offering on behalf of the spirits residing in hell. Long practice enables the Brahman to acquit himself of the performance of this very elaborate and painful ceremonial in less time than is occupied in the description.

Brahmans observe practices of peculiar difficulty in order to maintain their superiority over the other castes. Of these the most strict is an observance of the Nagar Brahmans, called 'Nuven,' or purity in regard to food. The Brahman, having bathed, dresses himself in silk or woollen clothes, or if he require to use cotton garments, these must be dipped in water, wrung out, and dried in some place where nothing impure can touch them. Thus habited, he sits down to dinner; but he must preserve himself from numerous accidents which would render him impure, and compel him to desist from his meal. If he touch an earthen vessel he is defiled, unless the vessel have never contained water. The touch of a piece of cotton cloth, or of a piece of leather or paper, which he may accidentally have sat down upon, renders him impure; but if Hindu letters have been written on the paper they preserve him from defilement, because they represent Saraswati, the goddess of learning, the sakti of Brahma. If, however, letters be written on cloth or leather, these remain impure. Thus, if the Gita, or any other portion of scripture, be required for use at the time, it must be bound with silk, and not with cotton; leather must be avoided, and instead of common paste of flour and water, the bookbinder must employ paste of pounded tamarind seed. A printed book will not answer the Brahman's purpose, because printing ink contains impure water. Some think that the touch of deerskin does not defile. Raw cotton does not render the Brahman impure, but if it have been twisted for the wick of a lamp by a person not in the state of 'Nuven,' it does; and again, if it have been dipped in oil or clarified butter it does not. Bones defile, but women's ivory armlets do not, except in those parts of the country where they are not usually worn, and then they do. The touch of the child of the same caste who has not learned how to eat grain does not defile, but if the child have eaten grain it does. The touch of a donkey, a dog, or a pig defiles; some say that the touch of a cat also defiles; others are inclined to think that it does not, because, in truth, it is not easy to keep the cat out. If a Brahman who is in 'Nuven' be eating, or if he have risen from eating, the touch of his person defiles another Brahman who is in 'Nuven,' but has not begun his dinner.—*Forbes' Rasamala or Hindu Annals*, ii. pp. 256-259.

THARU appear to have been at one time a Gangetic tribe, dominant in Gorakhpur, and Buchanan Hamilton appears to connect them with the Tibetan invasion in the 7th century. The Tharu inhabit the forests; they are a wild, uncultivated, and extremely superstitious race, and assign to themselves a mythological beginning. Their villages are divided into certain circuits, marked off by the bhurra of Bheonhar, a self-created superior, whom these people believe to be inspired by Bhowani, and to whom they submit in every occurrence of their domestic lives. A bhurra is indispensable at every birth, marriage, and death, directs all religious ceremonies, and has supreme influence in the circuit to which he belongs. He has, however, to prove his inspiration before the assembled villagers by one of two methods, either by drawing seven times the flame from a lighted to an unlighted wick without bringing the two in contact, or by calling upon Bhowani, who is supposed to descend upon him, when the bhurra begins to dance and jump about violently, and convince the assembled crowds of superhuman powers by his movements and gesticulations. The bodies of the Tharu that die in advanced years are burned, but those of the young are buried; also, though their widows are allowed to remarry, a man may not marry the widow of his younger brother.

THATCH. In the S. of the Peninsula of India, the thatch in use with the people is made of palmyra leaves. It is the best thatch for houses, and the most durable. Next to it, in Madras, ranks in value the Cyperus textilis, which grows on the banks of rivulets in the low country, and is called Koary. The leaf of the cocoanut is a very perishable material, and only employed by the very poor. In the Dekhan a long grass is chiefly used. The Karen in Burma use the large palmated leaf of a tall wild palm, a species of Livistonia, but the Europeans and Burmese there use the atap, leaves of the Nipa fruticans. The Karen in Amherst province employ the tall grasses, Imperata cylindrica, Saccharum cylindricum, and S. spontaneum. Long grasses and sedges (Arundo, Saccharum, and Scleria) are cut and stacked along the water's edge of the Brahmaputra in huge brown piles, for export and thatching. In S. India, for thatch, the natives also use the straw of the common grains, called in Tamil Vakel or Vagghil straw (A. muricatum), and the spice grass (Andropogon schœnanthus), also the cocoanut leaves made into a kind of coarse matting called Tennam kittu. The Gabagaba, the midrib of palm leaves, particularly of the leaf of the sago palm, is much used throughout the Moluccas for building and fencing. The Bhare of Northern India is a jungle grass about 9 feet high, used for thatch and tatties. Its canes are called Nunre. Through almost all Arabia species of Panicum or Scirpus are used for covering the roofs of the houses,—slender coverings, but sufficient in countries where rains are unfrequent. — *Birdwood; Royle; Niebuhr's Travels*, ii. p. 34; *Hook. H. J.* ii. p. 373; *Ains.*

THATCHANAGANTHAM. SANSK. The southern solstice. See Avani Avattam.

THA-THANA-BAIN. BURM. Defender of the Faith. The title of the high priest or patriarch of all the Phoungye or Buddhist priests of Burma. —*Yule*, p. 165.

THATHERA, metal workers in Benares, distinct from the Kasera, although, to some extent, they work in the same metals,—iron, tin, zinc, brass, copper, and kasa or bell-metal.

THATUN, 40 miles N. of Martaban, on the Salwin river, supposed to be the Suverna Bhumi or Golden Chersonese. It was sacked by Anaratha, king of Pegu, A.D. 1080.

THATYAL, meaning the maimed, a wandering Gond tribe; also called Pendabarya, or minstrels of God; also Matyal, because their songs are

chiefly in honour of the goddess Mata. They make baskets.

THAU, the Tauutic emblem of the Egyptians, the hieroglyphic of the god Toth, was originally expressed, according to Kircher, by the simple figure of a cross, like the Greek T and the Coptic *dau*. The Hebrew *tau* is supposed to have been derived from it, though it has deviated from its shape. It is frequently found on the Egyptian obelisks, and was always regarded as a talisman of extraordinary potency. The original in Ezekiel is, 'Set a *tau* upon their foreheads,' instead of 'mark;' which sense the Vulgate preserves, 'Mark with the letter *tau* the foreheads,' etc.; upon which Louth observes that in the parallel passage in the Septuagint, το ημιον, a mark, should be *Tau ημιον*, the mark Tau. It is worthy of note that in the Samaritan character, in which Ezekiel wrote, it is agreed among the learned that the *tau* was formerly cruciform, corresponding in shape with the Tauutic cross and the English letter T. From this we learn that the crucifix was a sacred sign among the Jews, as well as the Egyptians, a hieroglyphic marking, the property of the deity. In this sense the language of Job is beautiful and appropriate:

> 'Behold, here is my Thau!
> Let the Almighty answer me.
> Surely I would take it upon my shoulder,
> And bind it as a crown to me.'

Count de Gebelin observes that in France, in the early ages of Christianity, during the ceremony of baptism, the officiating priest said, 'Crucis thaumate notare;' hence the Jews themselves, in the later periods of their history, fell into the error, as also did the early Christians; and even in modern times the potency of the wizard's charm and the fortune-teller's crawl is an article of vulgar belief. The phylacteries of the Jews, mentioned by our Lord, were strips of parchment inscribed with paragraphs of the law, which were worn on their caps and arms, and inscribed on their door-posts, to prevent the intrusion of evil agencies, as the root in the Greek, from whence the name is derived, signifying to guard or preserve, plainly shows. The Christian heretics of the second century, especially the Gnostics, used gems, inscribed with the word Abraxas, for a similar purpose; but the 'curious arts' which the Ephesians abandoned, still maintain their hold upon the popular mind; and the Greek imprint the crucifix as a resistless spell. The all-potent word Abraxas, variously written Abrasax and Ias, occurs, referring to the Supreme Deity and Jesus. The 'curious arts' of the early Christians were condemned in the council of Laodicea, A.D. 364, can. 36; the fathers declaring that such phylacteries or charms were bonds and fetters to the soul, and ordering those who wore them to be cast out of the church. In the east, the Vaishnava and Saiva Hindu affix marks to their foreheads; Muhammadans defend their houses and persons with tawiz, passages from the Koran. It is a general custom amongst the Muhammadans of India of the present day to carry holy texts of the Koran on their arms and in their turbands, and to place charms on their door-posts.—*Du Cange, Gloksar.; Voces Ligaturæ, Legationes, in Milner's Church History.*

THAVAN, meaning god, is the tribal title of the Maravar race of the S. of India.

THAWA, a lowland tribe mentioned by Dr. Campbell as inhabiting similar tracts to their neighbours the Mechi.—*Campbell*, pp. 50, 149.

T'HAY. The T'hay stock, the people of Siam. See India; Siam.

THAYETMYO, a military station in Pegu, near the British frontier. It gives its name to a district, of which it is the chief civil station, in lat. 19° 18′ 43″ N., and long. 95° 15′ 40″ E., on the right bank of the Irawadi. Thayetmyo signifies 'Mango city;' but this is said to be a corruption of 'That-yet-myo,' or 'City of Slaughter,' so called, as tradition alleges, from one of its early rulers, who killed his sons in order that they might not rebel against him when they grew to manhood. The district is 2397 square miles; pop. (1881), 169,560 souls. On the east and west are the Pegu and Arakan Yoma ranges respectively; and the face of the country, where it does not rise into mountains, is everywhere broken by low ranges of hills, many of which are barren and destitute of all vegetation.

Several salt and hot springs occur in Thayet district. 9½ miles north-north-west from Ka-ma is situated the spot where the curious manifestation known as the 'Spirit Fire' takes place. This is caused by the ignition by some unknown means of the gas which is stored up in subterranean cracks. Petroleum is found near Pa-douk-beng, 7 miles north-north-west from Thayetmyo; also at Bhan-byeng, about 9 miles from the same town.

The cotton of Thayet is perhaps the best in Burma. It is grown entirely in toungya clearings, and is generally sown with rice or sesamum. The cotton-cleaning machine consists of a frame-work of four posts, a bamboo pedal, a fly-wheel, and two cylinders placed close to one another, the upper one being of thin iron, and the lower somewhat larger and of wood. The bamboo pedal is attached by a string to the fly-wheel, and the wooden cylinder has a handle at the end opposite to the fly-wheel. With this apparatus, one operator will clean about 12 viss (43 lbs.) of raw cotton in a day, turning out about 4½ viss (16 lbs.) of cleaned cotton. It is also the largest tobacco-growing district in Burma. The plant is grown chiefly on sandbanks in the Irawadi, which are submerged during the rains.

Prome and Thayetmyo supply the greater portion of the catechu manufactured in British Burma. The mulberry tree is extensively cultivated for the rearing of silk-worms. The price of raw silk varies from £1, 10s. to £2 per viss (3·65 lbs.).—*Imp. Gaz.; Census* 1881.

THEA CHINENSIS. Siam. The celebrated tea plant, one of the Ternstrœmiaceæ, a native of China, of Assam, and the regions south to the borders of Cochin-China. It has three varieties—T. Assamica, T. Bohea, *Linn.*, and T. viridis. It is the Camellia thea of Linklater. In China, so famed for its production, it is only known under cultivation. It must have been used in China from very early times. It is differently named in different parts of China, as Tcha or Cha, also Tha, whence we have Tsia, The, and Tea. In Persian works in use in India, tea is called Cha-i-Khatai, or tea of Cathay.

THEATRICAL REPRESENTATIONS are common among the Tamils, the Burmans, the Chinese, and the Malayanesians, but are of comparatively rare occurrence amongst the Northern

Hindus. In ancient Hindu times, plays were written for representation on lunar holidays, royal coronations, at fairs and religious festivals, marriages, taking possession of a house or town, and the birth of a son. Specimens of these dramatic writings were given in the translation of Sakuntala, by Sir W. Jones; in that of Prabodha Chandrodaya, or Rise of the Moon of Intellect, by Dr. Taylor of Bombay; in Professor Wilson's Hindu Theatre, and Professor Monier Williams' Nala and Damayanti. They seem to have been written for one performance, lasting for 4 or 6 hours, and to have been represented only once. With the Burmese, a dramatic representation lasts a whole day or more, and with the Chinese, even for ten days. Amongst the Athenians a piece was never performed a second time, at least under the same form. The ancient Hindu drama is in Sanskrit. The Burmese representations are stated by Mr. Oldham to be indelicate, but Colonel Phayre's opinion is not in accordance with that. In India, amongst the Hindus, traces of an inferior order of the drama are to be found in the dramatized stories of the Bhand (HIND.) or professional buffoons; in the Jatra of the Bengali people, and the Rasa of the Western Provinces. The *Bhaur* is a representation of some ludicrous adventure by two or three persons, carried on in an extempore dialogue, usually of a very coarse kind, and enlivened by practical jokes not always very decent. The *Jatra* is generally the exhibition of some of the incidents in the youthful life of Krishna, maintained also in extempore dialogue, but interspersed with popular songs. Radha, the mistress of Krishna, his father, mother, and the Gopi, are the ordinary dramatis personæ, and Nareda acts as buffo. The *Rasa* partakes more of the ballet, but it is accompanied also with songs; whilst the adventures of Krishna or Rama are represented in appropriate costume by measured gesticulations. The most recent dramatic Hindu writings are of a mythological and sectarial character.

During the 7th decade of the 19th century, there were frequent revivals of the Tamil drama at Madras. In China, companies of actors travel about the country, and engage themselves to committees of temples or guilds, or to wealthy individuals, for a week or more at a time. Admission is gratis; the play is carried on night and day, with intermissions for food. The female parts are taken by men. These representations resemble the Pooay of Burma.—*Wilson's Hindu Theatre.* See Drama; Literature.

THEBES, a ruined city in the valley of the Nile, the capital of an ancient dynasty of a people now forgotten; but here science and art once flourished.—*Catafago.*

THEGAI CHETTOO. TEL. A creeper of Ganjam, which is soaked and then beaten to extract its fibres.

THEIN. BURM. A chapel for the consecration of the Burmese priesthood, constructed on holy ground; an open pavilion, supported on four pillars, built over the large sitting gilt images of Gautama. The Albert Memorial in shape is similar to a thein.—*Yule*, p. 12.

THEINE. The properties of tea depend chiefly on the presence of tannin, of a volatile oil, and of a principle called theine ($C_8H_5N_2O_2$), which has been found to be identical with caffeine, and is a salifiable base. It may be obtained in white silky needles; has a mild, bitter taste; is soluble in hot, but sparingly so in cold water and alcohol. It has astringent and moderately excitant properties, chiefly affecting the nervous system, producing some degree of exhilaration, and of refreshment after fatigue. Its effects are well seen in the wakefulness produced. But it is thought by some writers to act as a sedative on the heart and blood-vessels; or, as Dr. Billing explains it, tea and coffee are sedatives, and relieve the stupor produced by stimulants or the drowsiness of fatigue, or other plethora, only by counteracting the plethoric state of the brain, induced by the continued stimulation of action, — thus merely restoring the brain to its normal state. Liebig (Anim. Chem. p. 179) has suggested that theine, as an ingredient of diet, may be useful in contributing to the formation of taurine, a compound peculiar to bile. Besides being useful as a diluent, it may often be prescribed as an agreeable and refreshing beverage; in some cases, especially when made strong, acting as an excitant, and at other times producing sedative and calming effects. Tea is very extensively cultivated in Kangra valley and Kullu, in Assam, and on the Neilgherries. Coffee leaves are infused in the same manner as the tea leaf, and the beverage coffee-tea is said to be in common use in Sumatra. The coffee decoction or new tea are valuable in opium-poisoning.

THELPHEUSA, a genus of crustacea, comprising—

Thelpheusa Indica, *Edws.*, Coromandel coast.
T. chaperon arrondi, *Q. and G.*
T. perlata, *Edws.*, Cape of Good Hope.
T. Leschenaultii, *Edws.*, Pondicherry.

THENG-BAN-SHA. BURM. A bast of Arakan, coarse looking, and of a reddish-brown colour, but divisible into a number of very thin layers, with a good deal of flexibility and some toughness.—*Royle.*

THENG-GAN. BURM. This wood, a native of Amherst, is employed for house-posts, carts, boat-building, paddles, and oars. It is an excellent compact wood, fit for gun-carriages. It is the wood in most general use for almost all purposes, but principally for large canoes, which form the bottoms of the native trading crafts; this is owing to its being more plentiful than most of the others, easily worked, and by killing the tree before felling, as with teak, is rendered capable of floating. This process, however, is rarely observed; the tree selected for working is felled and hollowed on the spot, and the canoe removed to the neighbourhood of the water to undergo the process of widening by fire; some trees producing by this rude process, canoes of 60 to 70 feet long, by 6 to 8 feet in breadth across the centre.—*Cat. Ex.*, 1851.

THEOBROMA CACAO. *Linn.*

Cacao sativus, *Lam.* | C. minus, *Gærtn.*

The smooth-leaved chocolate-nut tree, a native of Central and South America, now cultivated in several parts of India and the E. Archipelago, and extensively in the West India islands. Its large oval yellow cucumber-like capsules, about 5 inches long, hang from the sides of the trunk and branches. These are divided into 5 cells, each filled with 8 to 10 ovoid seeds, piled one upon another, and covered by a membranous and succulent aril. There are several varieties of these seeds or nibs, which are more or less

esteemed. The kernels of the seeds yield by pressure about one-half their weight of a fatty oil, commonly called butter of cacao, at one time much lauded for its medicinal properties. The seeds, pounded, digested, and boiled with water, with the oil skimmed off, and sweetened with sugar and milk, afford a wholesome and agreeable beverage. A tree in full bearing is said to yield annually 150 lbs. of seeds. Dried, roasted, and ground, they constitute cocoa; mixed with starch and finely ground, soluble cocoa. The cocoa as sold in the retail shops, however, consists either of the roasted kernels and husks, or of the husks only, ground to powder; it is sometimes made from the cake left after expressing the oil from the beans. Much of the cheap stuff sold under this name is very inferior, being made with damaged nuts that have been pressed for the oil, mixed with potato-flour, mutton suet, etc. Flake cocoa is cocoa ground, compressed, and flaked by machinery. Chocolate (from the Indian name chocolalt) is made by triturating in a heated mortar the roasted seeds, without the husks, 10 lbs. with an equal quantity of sugar, and about 1½ oz. of vanilla and 1 oz. of cinnamon, into a paste, which is put up in various forms. The mass of the common chocolate sold in England is prepared from the cake left after the expression of the oil, and this is frequently mixed with the roasted seeds of ground peas and maize, or potato-flour, to which a sufficient quantity of inferior brown sugar or treacle and mutton suet is added to make it adhere together. The chocolate-nut tree is seen in Tavoy gardens, and it brings its fruit to perfection. This tree has been introduced into Travancore, where it thrives well; the fruit is round, but smaller than that produced in South America. It thrives well in the Calcutta Garden. The nutritive properties of chocolate depend on a concrete oil or butter, of most agreeable flavour, of which 1000 parts of the seed yield 386.—*Drs. Royle, Mason, Riddell, and O'Shaughnessy*, p. 227.

THEOPHRASTUS, the contemporary of Aristotle, B.C. 300, mentions fishes (De piscibus) found in the Euphrates, which, in the dry seasons, leave the vacant channels, and crawl over the ground in search of water, moving along by fins and tail. He wrote also on plants, 'Peri phuton istorias,' and notices 500 plants useful in medicine.

THEOPHYLACTUS SIMOCATTA, a Byzantine writer of the early part of the 7th century. He describes the Taugas as a people and state very famous over the east, originally a colony of the Turkish race, then forming a nation scarcely to be paralleled on the face of the whole earth for power and population,—evidently the rulers of China.—*Yule.*

THEOS, Θεός, GREEK, God, Zeus, is merely deus in one syllable. Deus is Theos. Zeu in Pelasgic Greek is Jupiter; Seu, Su, or Zu, probably Spartan of Theus. The tri-glyph letters of the ancient Pali alphabet, 3 yods; in Arabic, 3 strokes.

THERAI or Terai, a forest or jungle tract at the foot of the Himalaya, varying from ten to thirty miles in breadth. No two climates and locations can be more dissimilar than those of the hills and terai, and no races are more distinct in their habits, manners, and aptitudes than the people of the hills and those of this jungle belt below. There is little or no terai or forest belt north-west of the Saharunpur district and the Dehra Doon; but thence eastwards this belt stretches along the foot of the hills through Rohilkhand, Oudh, and the Bengal frontier, up to Assam. A great part of the Oudh terai was transferred to the Nepalese. Dr. Campbell describes the people of the Nepal terai as a vast assemblage of bastard Hindus.—*Campbell*, p. 47. See Terai.

THERMOMETER. The subjoined table shows the boiling points of distilled water at different elevations, up to 17,455 feet:—

Therm.		Elevation.	Therm.		Elevation.
212°	=	0 feet.	195°	=	8,953 feet.
211°	=	529 ,,	194°	=	9,502 ,,
210°	=	1021 ,,	193°	=	10,053 ,,
209°	=	1534 ,,	192°	=	10,606 ,,
208°	=	2049 ,,	191°	=	11,161 ,,
207°	=	2566 ,,	190°	=	11,719 ,,
206°	=	3085 ,,	189°	=	12,280 ,,
205°	=	3607 ,,	188°	=	12,843 ,,
204°	=	4131 ,,	187°	=	13,408 ,,
203°	=	4675 ,,	186°	=	13,977 ,,
202°	=	5185 ,,	185°	=	14,543 ,,
201°	=	5718 ,,	184°	=	15,124 ,,
200°	=	6250 ,,	183°	=	15,702 ,,
199°	=	6786 ,,	182°	=	16,234 ,,
198°	=	7324 ,,	181°	=	16,868 ,,
197°	=	7864 ,,	180°	=	17,455 ,,
196°	=	8407 ,,			

—*O'Shaughnessy*, p. 37.

THERO. SANSK. A presbyter.

THESAURUS ZEYLANICUS, a botanical work by John, or the elder, Burmann, published in 1737, with 110 plates, containing figures of 155 plants, which are generally very characteristic and well executed. Burmann's work appears to have been principally drawn up from specimens collected by Dr. Paul Hermann, who was sent out to Ceylon in 1670, and remained till 1677, at the expense of the Dutch East India Company, for the purpose of describing all the plants and spices growing in that island. Hermann's Museum Zeylanicum was first published in 1717, although it appears to have been written many years before. Besides the plants of Ceylon, it contains many species collected at the Cape of Good Hope, unfortunately not distinguished from the others, a circumstance which afterwards led Linnæus into the error of considering them all natives of the east. Hermann's herbarium had been lost upwards of half a century, until chance threw it into the hands of M. Gunther (apothecary to the king of Denmark), who sent it to Linnæus, requesting him to examine it, and affix the names to the plants throughout the collection. Its great value, from the collector having been so eminent a man, induced Linnæus to examine the whole with much attention, and he was thereby enabled to form many new genera and settle many doubtful species. He published the result of his labours under the title of Flora Zeylanica, sistens plantas Indicas Zeylonæ insulæ, quæ olim 1670–1677, lectæ fuere a Paulo Hermanno, Professore Botanico, Leydensi; demum post 70 annos ab A. Gunthero, Pharmacopæo Hafniensi, orbi redditæ (Holm. 1747, 8vo, pp. 254, tab. 4). In an appendix, the new genera are concisely given by themselves, copied from an academical dissertation published under Linnæus' presidency, by C. M. Dassow.—*Wight's Prodromus*, i. p. 9.

THESPESIA POPULNEA. *Lam.*

Hibiscus populneus, *Roxb.* | Malaviscus populneus, *Ger.*

Poresh, ...	Beng.	Bendi, ...	Mahr.
Poo-arasoo, . .	Can.	Bapariti, . .	Maleal.
Paras pipal, . .	Dukh.	Supara shavaka, .	Sansk.
Tulip tree, . . .	Eng.	Surya-gass, . .	Singh.
Portia tree, . .	,,	Pursa maram, . .	Tam.
Pahari pipal, . .	Hind.	Puvarasa maram,	,,
Imli Khorasani, .	,,	Gangaravi, . . .	Tel.

This handsome tree is generally met with in Ceylon and in Southern India, in avenues or lining roads, but is in most abundance near the sea. It is of quick growth, and yields a good shade, but is inconvenient on road-sides and in gardens, from the quantities of leaves it sheds, and the numerous large flowers which fall. It is commonly planted from cuttings, from which cause, perhaps, the tree is often hollow in the centre. It yields, when ripe, a very strong, hard, and durable timber, with a colour like mahogany, but its use is limited from the difficulty of getting it of large size. It is used for chairs in Madras. On the Bombay side, where it is found only near the coasts, it is much used in the construction of cart-wheel spokes, and for the timbers of native boats. The shoots are also in extensive use there as rafters for houses, and at all times fetch a good price when sold for this purpose. The Bombay Government formed plantations of this tree at Sakuria in Alibagh, at Sat Tar, and in Colaba. The increasing scarcity of this tree is such, that wheel-spokes were at one time being paid for by the Gun-Carriage Department at 12 annas each. There are a pretty large number of these trees within the village precincts of many of the cultivators in the Konkan, but these are mostly reserved for the supply of choice rafters, afforded by the straight shoots of the tree, while the stem is most frequently hollow; and therefore the ripe wood, or such of it as remains, is worthless for ordnance purposes. Though of rapid growth, its wood is not in much use. Some Ceylon caterpillars sting; a greenish one, which occupies the Thespesia populnea at a certain stage in its growth, descends by a silken thread, and hurries away. The moth of this is supposed to be a Bombyx, near Cnethocampa. The capsules yield a yellow dye, which is used as a wash for cutaneous diseases, as is also the bark boiled in water, and the latter is given internally as an alterative.—*Stephens; Drs. Voigt, Wight, Thwaites, Gibson, Cleghorn; Captain Beddome.*

THEVENOT, the younger, was a great traveller. He was born at Paris, and died at Miana in Persia, about eight days' journey from Tauris, November 18, 1667. He was Monsieur Petis de la Croix's friend, so he took care to revise his Memoirs, and had them printed in three volumes in 1689? The first contains his travels into Turkey, the second his travels to Persia, and the third to India. An edition in five volumes was printed in Amsterdam in 1727. Monsieur Petis de la Croix, jun., the oriental interpreter to the king of France, being at Miana afterwards, disinterred his bones near the caravansary where they had been buried, and had them interred at Tauris, under the altar of the Capuchins Church there, in 1676. Mouri and other French writers confounded the two Thevenots, as appears from the Dictionnaire Historique of Ladvocat (Par. 1760), and the Nouvelle Bibliotheque d'un Homme de gout, tome iii. p. 454 (Par. 1777), styling him indifferently Fager, or the nephew, or the traveller. In Thevenot's journey through India, he sailed from Bosra on the 6th November 1665, and arrived at Surat 10th January 1666. He proceeded via Baroach to Ahmadabad, Cambay, Agra, Dehli, Allahabad, Burhampur, Goa, Golconda, Hyderabad, Masulipatam, Surat, Bandar Abbas, Shiraz, Kum Farsank, and died at Miana. Mordechin is noticed by Thevenot.—*History of Chengiz Khan*, p. 446.

THEVETIA NERIIFOLIA. *Juss.*

Cerbera Thevetii, *Linn.* | C. thevetia, *Don.*

The exile tree, is a common ornamental shrub in the gardens of the Peninsula and in Calcutta; grows to the height of 10 or 12 feet, with long tapering leaves, and blossoms throughout the year. Its juice is acrid. Two grains of its bark have been affirmed to be equal to an ordinary dose of cinchona. Wood worthless.—*M. E. J. R. Cat.; Madras Gardens; Riddell; Ind. Ann.*

THIAN SHAN or Tien-Shan, a mountain range in Central Asia. Semiretchinsk, or seven-streamed, is the southernmost of the three provinces that make up now the general government of the steppe. In the east are rich valleys of fertile black earth, and mountain gorges lying deep in forest recesses; but the most remarkable portion is the southern mountainous region of the Thian Shan, which, after the Himalayas, contains some of the most gigantic mountains in the world. The entire length of the Thian Shan is about 1660 miles, and its highest peaks everywhere exceed the limit of perpetual snow. It has plenty of peaks from 16,000 feet to 18,000 feet high, and one of them is said to exceed 21,000 feet. The glaciers of the Thian Shan are computed at not less than 8000; and there are numerous snow bridges, some of them a mile and a third in length, and 100 feet in thickness. General Kolpakofsky reports that he discovered the perpetual fires in the Thian Shan range of mountains; that the mountain Bai Shan has been found 12 miles north-east of the city of Kuldja, in a basin surrounded by the massive Ailak mountains, and that the fires which have been burning there from time immemorial are not volcanic, but proceed from burning coal. On the sides of the mountain there are caves emitting smoke and sulphurous gas. Mr. Schuyler also, in his Turkestan, mentions that these perpetual fires in the mountains referred to by Chinese historians were considered by Severtzoff, a Russian who explored the region, as being caused by the ignition of the seams of coal or the carburetted hydrogen gas in the seams. The same author further mentions that Captain Tosnofskey, another Russian explorer, was told of a place in the neighbourhood from which steam constantly rose, and that near this crevice there had existed from ancient times three pits, where persons afflicted with rheumatism or skin diseases were in the habit of bathing. Flames are also said to issue from Mount Hote Kesu, near Turfan, 420 miles further eastward. See Tien.

THILACUM. Tam. The sectarial mark placed by Hindus on their foreheads to indicate the sect to which they belong. The Smartta Brahmans and Saiva sect draw horizontal lines with ashes (vibudi) and sandal-wood powder, with a round spot of saffron in the middle.

The Madhava sect of the Vaishnava have perpendicular marks, with sandal-wood paste

and burnt incense, with a round spot in the centre.

The followers of Ramanuja, another Vaishnava sect, usually mark a trident with white and saffron-coloured perpendicular lines. See Tilaka.

THIRST. The Eastern Arabs allay thirst by a spoonful of clarified butter, carried on journeys in a leathern bottle. Every European traveller has some recipe of his own. One chews a musket bullet or a small stone; a second smears his legs with butter; another eats a crust of dry bread, which exacerbates the torments, and afterwards brings relief; a fourth throws water over his face and hands, or his legs and feet; a fifth smokes. But to conquer the craving, be patient and do not talk. The more you drink, the more you require to drink—water or strong waters. But after the first two hours' abstinence you have mastered the overpowering feeling of thirst, and then to refrain is easy.—*Burton's Pilgrimage*, iii. p. 19.

THIRTANKARA, a sainted Jain teacher.

THITSEE, Burm., is the celebrated Burmese black varnish, obtained from Melanorrhœa usitatissima. In varnishing an article, the Burmese first give it a coat of the coarser kind. When this is dry, they lay a coat of a better quality over it, and finish with a coat of the best over all. Price, Rs. 120 for first quality, Rs. 80 for second, and Rs. 60 for third quality, for 365 lbs.—*Local Committee, Rangoon.*

THLEN. In the neighbourhood of Cherrapunji, in Assam, the people believe in Thlens. The original Thlen was a gigantic snake, a monstrous worm, which lived in a cave near Cherrapunji, and ate men and animals. One day, however, a local hero addressed himself to the task of overcoming the Thlen by guile. He drove a herd of goats to the mouth of the cave, and offered them one by one to be eaten. By degrees the monster became friendly, and learned to open his mouth at a word from the man, to receive a lump of flesh, which was then thrown in. These relations being established, the dragon-slayer heated a lump of iron red-hot, and heaved it into the Thlen's open mouth. This killed the Thlen, whose body the man then cut up, and sent the pieces to different people in various directions, with orders that each piece was to be carefully eaten. Wherever this was done, the people were troubled with no more Thlens; but one small piece, which nobody would eat, was left, and from this sprang a brood of serpents which still infest Cherrapunji. Now, when a Thlen takes up his abode in a house, there is no turning him out; he only leaves when he pleases, which is mostly when any of the property of the family is sold or given away. The Thlen brings wealth to a family, but on the understanding that he is supplied with blood. The people know when the Thlen is thirsty, by the appearance of some sickness or misfortune in the house. To satisfy his craving, a human being must be murdered. The victim's hair and fingers, and a quantity of his blood, are put in a bamboo tube, and it is believed that the Thlen appears in the form of a snake, and devours the body of the murdered person, which is materialized from the portions thus offered. After this the affairs of the household prosper. Many families in the hills are suspected to be Ri thlen, or keepers of a Thlen. In 1881 it is believed that three murders were committed with the object of appeasing a Thlen. One of the victims was an old woman, another a boy. In each case one or two persons were convicted; one man was hanged, and the rest were sentenced to imprisonment for life, or a term of years.

THODIKAN and Cicilly, in Southern India, are two towns on tributaries of the Puiswany and Netravatty. The priests of the Hindu temples there have a legend that their god (Eswara) performed a journey from Kailasa to Thodikan on the back of a mahseer. These fish are therefore protected by the priests, and pilgrims feed them. They are exceedingly tame and numerous. Round the temple steps fish of all sizes, from 8 lbs. downwards, are thickly packed, scrambling over each other's backs into the air, and up the stone steps, and taking food out of the hand.

THO-JI-CHAN-MO, a plain in Ladakh covered with natron. In its centre is the Tsho-kar or White Lake, called by the Hindus of Chamba and Bisahar, Khari Talao, or the Salt Lake, in lat. 33° 15′ N., and long. 77° 50′ E., at an elevation of 15,684 feet. To the south of the Tsho-kar is a small fresh-water lake that supplies the salt-water lake. It is a favourite haunt of the Kyang or wild horse.

THOMAS. Edward Thomas, a Bengal Civil Servant, editor of Prinsep's Antiquities, joint editor of Sir Henry Elliot's posthumous History of India. He wrote On the Coins of the Patan Sultans of Hindustan; On the Coins of the Kings of Ghazni, A.D. 961-1171; The Epoch of the Sah Kings of Surashtra; On the Numismatic History of the Early Muhammadan Arabs in Persia; On the Explanation of Oriental Legends to be found on certain Arsacidian and Partho-Persian Coins; The Initial Coinage of Bengal, introduced by the Muhammadans A.H. 600 to 800 (A.D. 1203-1397); the same, with a Supplementary Part, embracing the preliminary period between A.H. 614-634; also Comments on Recent Pehlavi Decipherments, with Contributions to the Early History of Tabaristan. 'Towards the end of August 1863, an unusually large hoard of coins, numbering in all no less than 13,500 pieces of silver, was found in the protected state of Koch-Bahar, in Northern Bengal. This accumulation, so singular in its numerical amount, is not the less remarkable in the details of its component elements. . . . It may be said to embrace compactly the records of ten kings, ten mint cities, and to represent 107 years of the annals of the country.'

George Thomas, a native of Tipperary in Ireland, who came to India as quarter-master of a ship of war. He deserted, and in 1787 he took service with the Begum Samru, and rose into high favour. He carved out for himself an independent principality at Hansi, where, to use his own words, 'I established a mint and coined my own rupees, which I made current in my army and country; . . . cast my own artillery, commenced making muskets, matchlocks, and powder; . . . till at length, having gained a capital and country bordering on the Sikh territories, I wished to put myself in a capacity, when a favourable opportunity should offer, of attempting the conquest of the Panjab, and aspired to the honour of placing the British standard on the banks of the Attock.' Thomas at this time had a revenue of four or five lakhs of

rupees. At one time he seems to have entered the service of Apa Kunda Rao, a principal officer of Sindia. In S. 1857 (A.D. 1801), for the sum of three lakhs of rupees, he put the Bhatti race into the possession of Bhatnair, but the succeeding year the Rahtor Rajputs again wrested it from them. After twice defeating Perron's troops, he accepted Lord Lake's terms at Hansi, 1st January 1802, and proceeded towards Calcutta with about one lakh of rupees, but he died near Berhampur, August 1802, and was buried in its churchyard.

St. Thomas the Apostle is generally believed to have proceeded to Arabia, and some say to India, and to be buried at St. Thomé or Mylapur, a suburb of Madras, where his tomb is shown in the Portuguese Roman Catholic cathedral. But there is much doubt both as to the places in which he laboured, and as to the place and circumstances of his demise. Even in the same cathedral at St. Thomé is a bone relic, sent from a former pope of Rome, and older traditions in the west assert positively that Thomas was buried at Edessa. There is a hill ten miles from Madras, called St. Thomas' Mount, to which, from unknown times, Syrian and Roman Christian pilgrims from all Asia repair; and at the Little Mount, at the Marmalong Bridge, six miles from Madras, is shown a cave where St. Thomas is said to have been killed. There are numerous native Christians in Madras and its neighbourhood, mostly the fishermen, but no tradition exists as to their conversion. Those near the Triplicane temple of Vishnu have houses built over temple ground, on the stipulation of pulling the idol car. Nicéphorus declares St. Thomas to be the apostle of the Indians; and Gaudentius says, like Sophronius, that he died in India at the town of Calamina, which is no other than Mylapur, a place at a short distance from Madras. Marco Polo relates that St. Thomas was accidentally killed when at prayer in a wood, by a low caste man, who was shooting at peacocks, and that, as a consequence of this mischance, none of the poor man's tribe could ever enter the place where the saint lay buried. Gibbon says that 'Marco Polo was told on the spot that he (St. Thomas) suffered martyrdom in the city of Mylapur.' Dr. Fryer, who visited India about 1680, says that 'about this mount live a caste of people, one of whose legs are as big as elephants', which gives occasion for the divulging it to be a judgment on them, as the generation of the assassins and murderers of the blessed apostle St. Thomas, one of whom I saw at Fort St. George.' Some of the doubts as to St. Thomas the Apostle seem to have arisen from the martyrdom of a Christian named Mar Thomas. It is on record that Alfred the Great despatched from Britain an embassy under Sighelm, Bishop of Shireburn, to the shrine of the saint at Madras. This was in 883, and it seems little likely that if the legend of the death and burial of St. Thomas in the neighbourhood of Madras really arose out of the fact of the death and burial of Mar Thomas, —an event which took place only about half a century before Alfred's embassy,—there should have been at that time, either in Egypt or Great Britain, any confusion of an incident which occurred fifty years before with one that was at least eight centuries old. It is surmised by Gibbon and other writers, that the pilgrims were despatched from Great Britain, but never proceeded farther than Alexandria, where they 'collected their cargo of legend.' The Christians on the coast of Malabar trace their paternity to the Apostle Paul, who 'went through Syria and Cilicia confirming the churches.' They looked to Syria as their spiritual home. They owned the supremacy of the patriarch of Babylon. It appears that while the Indian bishoprics were under the authority of the Christian patriarch of Seleucia, an Armenian Christian named Thomas Cana took up his abode at Malabar, and some suppose that his name has led to the belief that Thomas the disciple visited India. Thomas is said to have founded seven churches in Malabar. According to Eusebius, it was Bartholomew who visited India. The Eastern churches believe that St. Thomas preached in Arabia Felix and Socotra, on his way to India, about A.D. 50, where he suffered martyrdom. And it is said that the rudiments of the religion of the cross were first implanted amongst the Himyarites by St. Bartholomew. It is also recorded that St. Pantenus was sent by Demetrius, Bishop of Alexandria, to preach in Arabia Felix, and that there he found traces of St. Bartholomew, amongst others a copy of St. Matthew's Gospel, written in the Hebrew character, which he brought away with him to Alexandria. In the reign of Tobba, son of Hasan, from A.D. 297 to 320, Christianity became more generally known in Arabia, and extended to Abyssinia, where the people, though surrounded by Muhammadan and pagan tribes, continue Christians till the present day. Subsequently, in A.D. 326, Frumentius was elected by Athanasius bishop of the Indians, and he contributed much to the propagation of the Christian religion; but whether Arabia or Abyssinia was the scene of his labours, is disputed. In A.D. 342, Theophilus Indus, a native of Diu, obtained permission to build churches in Yemen, one of which was located in Aden.—*Playfair; Kaye's Christianity in India; P. Vincenzo Maria, Viaggi*, p. 132; *Yule, Cathay*, ii. p. 378; *Huc's Christianity*, i. p. 2; *Growse.*

THOMSON, DR. THOMAS, a medical officer of the Bengal army, an eminent scientific botanist and traveller; author of Travels in the N.W. Himalayas, and, with Dr. Hooker, joint author of the Flora Indica. Dr. Thomson's botanical collections, made in the plains of N.W. India between 1842 and 1847, chiefly in Rohilkhand, Ludhiana, and the Panjab, amount to about 1000 species. His Himalayan collections were partly collected in Kamaon and Garhwal during short visits to these provinces in 1844 and 1845, but mainly consist of the herbarium collected during a Government mission in the N.W. Himalaya and Tibet, in 1847, 1848, 1849, in the course of which he visited, in 1847, Simla, Kanawar, Piti; and in 1848, Kashmir and the Panjab, Himalaya, Ladakh, and the Kara-korum pass. The summer of 1849 he spent at Simla and Ladakh. These amount to rather more than 2500 species.

THOR, of the Scandinavians, is the same as Sor or Sol, the sun, Surya. The ancient people of the north pronounced ss as th. Thor's battle-axe is the cross. Pattee is the Swastika of the Buddhist, and the monogram of Vishnu and Siva. Thor's symbol of governance was the last letter of the Samaritan alphabet, the tau or tao in its decussated form. It is the mark which the

prophet Ezekiel (ix. 4) was ordered to place on the foreheads of the faithful in Judah, and Indian women still place it on their stores of grain. It is placed on the jars of water from the Ganges and Indus, and in the south of India is used as the emblem of disembodied Jain saints. It is the mystical Tao Sze of the Buddhists, is the chief ornament on the sceptre of the Bon-pa deities of Tibet, and is expressed on the Artee or musical bell borne by Bal Govind. See Basant.

T'HORI, Tawari, or Tori, dwelt in the t'huls of Daudputra, Bijnote, Noke, Naokote, and Oodur. They own and hire out camels, but, like the Bawuri and Khengar, were great thieves, and were called bhoot or evil spirits, and sons of the devil.—*Tod.*

THORN, of Proverbs xxiv. 31, is supposed by Sprengel to be the Alhagi maurorum. The 'thorns' of Proverbs xv. 19 is a species of Solanum.

THORN APPLE, Datura, *sp.*

Jous-masil, . . . ARAB.	Umana, . . . MALEAL.
Datura, BENG., GUJ., HIND.	Gaoz-giah, . . . PERS.
Kechubuh, . . . EGYPT.	Banjdashti, . . . ,,
Pomme spineuse, . . FR.	Dutro, ... PORT.
Stechapfel, . . . GER.	Krishna dhatura, SANSK.
Datura stramonium, LAT.	Kalu-attana, . . SINGH.
Kachu-bong, . MALAY.	Karu-umatè, . . TAM.
Rotikubung, . . ,,	Nalla ummetta, . TEL.
Humatu, . . MALEAL.	Tatura, ... TURK.

There are several species of Datura. The whole plant of D. fastuosa has a rank odour, which may be detected at a distance. All parts possess medicinal properties. The seeds are brownish or black, flattened, kidney-shaped, without odour, except when bruised, and have a bitter taste. For the purpose of facilitating theft and other criminal designs, the seeds are frequently given in India with sweetmeats, to stupefy merely, but not with the intention of killing, although there is no doubt that for the latter purpose it has also been used. The root, dried leaves, capsules, and seeds are recommended by European medical practitioners in India, to be smoked in cases of spasmodic asthma. The white-flowered thorn apple is D. alba, *Rumph.*; D. fastuosa, *Willd.*, is the purple-flowered variety. —*Faulkner; O'Shaughnessy.* See Datura.

THORNTON, EDWARD, author of a Gazetteer of the Countries adjacent to India on the North-West, including Sind, Afghanistan, etc., London 1844.

THOUSAND ISLANDS, a group of about 60 small islands in the passage from Batavia to Banca. The most northern is in lat. 5° 26′ S., long. 106° 32′ E.

THREE. This number in China is expressive of honour.—*Dr. Edkins.*

THRESHING. With the Hindus, when the harvest begins, a level spot is chosen for a threshing-floor, and made dry and hard. A pole 5 feet high is fixed in the centre, the grains are heaped round the floor, and the women break off the ears and throw them in. Oxen are then tied to each other and to the post, and driven round to beat out the corn.

THRUSH. The thrushes are birds of the family Merulidæ, which Dr. Jerdon arranges into wrens, short wings, ground thrushes, whistling thrushes, short-legged thrushes, babbling thrushes, true thrushes, and wren thrushes. The blue rock-thrush, Petrocincla cyanea (P. pandoo, *Col. Sykes*), is distributed over S.E. Europe and the temperate and torrid parts of Asia. By some it is supposed to be the bird alluded to in Scripture, 'the sparrow that sitteth alone upon the house-top.' P. longirostris, a long-billed variety, is common among the rocks of the N.W. Himalayas. It would seem that this is a permanent race of P. cyanea, and peculiar to the more northern regions. All Dr. Adams procured in Ladakh and Kashmir belonged to this variety. The hill blackbird or blue water-thrush (Myiophonus Temminckii) is one of the most beautiful and common tenants of the Himalayan streams. It builds its nest on the cliff over the mountain torrent. During incubation the male may be seen sallying forth, sporting from cliff to cliff; his melodious note, sounding sweetly among the roaring of the troubled waters, has a resemblance to that of the blackbird, but is softer. The blue of the body is more intense on the breast, and forms a gaudy halo across the forehead.

The pagoda thrush, Acridotheres pagodarum, is probably the bird referred to in Lalla Rookh—

> 'Mecca's blue sacred pigeon, and the thrush
> Of Hindustan, whose holy warblings gush
> At evening from the tall pagoda's top.'

The missel thrush, Turdus viscivorus, performs an up-and-down migration on the western ranges of the Himalayas, being found at high elevations in summer, and in the more sheltered situations of the valleys during winter. The black-throated thrush (Turdus atrogularis) is generally distributed over the woods and cultivated tracts of these ranges. The black throat is wanting in some varieties, and there are several well-marked similarities to what has been called the red-necked thrush (Turdus ruficollis), which Mr. Hodgson considers a distinct species.—*Adams' Sportsman in India; Jerdon.* See Birds, p. 377.

THRYSSA. This genus has the general aspect of the anchovy Engraulis, but the body is broader, the mouth enormous, and opening almost vertically. A species that inhabits Tenasserim waters may be denominated the Thryssa anchovy.—*Mason.*

THSUN or Tsum, a Chinese long measure nearly 1¼ inches.—*Simmonds' Dict.*

THUG, a class of murderers and robbers who sprang up under the first Muhammadan dynasties. 500 were executed in Etawa in the reign of Akbar. Thevenot, describing the dangers of the road between Dehli and Agra, advises travellers not to allow any stranger to come near, as the cunning robbers cast a running noose round the victim's neck and strangle him. Thuggee is, however, said by Colonel Meadows Taylor to be represented in the bas-reliefs of the temple of Ellora; but they seem to have become known to the British after the fall of Seringapatam (1799); and, on the discovery of thirty dead bodies in different wells of the Doab, Thuggeeism again came to the knowledge of the Calcutta Council, in 1810.

Dr. Sherrard of the Madras Presidency wrote about them in 1816. It was, however, on the reports of Captain Sleeman, about the year 1830, it became known that no part of the whole of India was free from these murderers, and a department was formed by the British Indian Government, empowered to suppress them. This was effected by the officers of the Thuggee Department tracing out the members of the gangs by inducing prisoners to become approvers, and reformatories were established to reclaim both the

children and the adult. By the year 1860 the gangs had become almost wholly destroyed. In nine years more than 2000 were arrested, 1467 were tried and convicted for the murder of 947 persons. Of these, 382 were hanged, 909 transported, 77 imprisoned for life, 92 for varying periods, and 21 acquitted; 11 escaped, 31 died while under trial, and 250 were admitted to be king's evidence (As. Journ., 1836). Between 1826 and 1835, 1562 prisoners were tried for the crime of Thuggee, of whom 1404 were hanged or transported for life; some of them confessed to over 200 murders. The Bhurtote or strangler was invariably hanged.

Many were kept at Jubbulpur in a central jail, where they were employed as wool and cotton weavers, and as tent-makers and carpet-makers.

It was a hereditary pursuit of families alike of Hindus and Muhammadans, both of whom practised it with the same conditions, ceremonies, and superstitious observances.

They had a slang language. The parties or gangs had fixed duties allotted to the members, as leader, persuader, strangler, gravedigger, and scout,—bold, resolute, active men, who received higher shares of the booty.

Their accomplices pursued every avocation, and gave information to those who more openly followed the profession. They usually travelled in considerable bands, sometimes numbering 200 or 300, but in such case they were broken up in parties of ten or more, who kept up communication, adopting all sorts of deceits, as merchants, travellers, etc., or in boats on the Ganges, and certain duties were allotted to each. The inveigler was called Sotha.

Thugs insinuated themselves into the society of travellers, and accompanied them until an opportunity occurred to murder them by strangling them with a handkerchief. The Hindu Thugs invoked the goddess Bhawani, but Muhammadans formed the largest number of the Thugs. As pirates and banditti of Europe made vows to Madonna, the pickaxe used for interments was devoted to Kali or Devi with much ceremony, and after each murder a solemn sacrifice (Tapooni or Tuponee) was made, in which sugar was offered to Devi.

Thug means deceiver. In some parts they are styled Phansigar, stranglers or hangers, from Phansi, HIND., a noose. In Tamil they are known as Ari Tulukar or Muhammadan noosers; in Canarese or Karnatica as Tanti Calleru, thieves who use a wire or catgut noose; and in Telugu, Warlu Wanlu or Warlu Vayshay Wanlu, people who use the noose. In Bengal the river Thugs were called Pungoo.

Thugs as a rule abstained from the murder of women, carriers of Ganges water, or of poets, of low castes, as washermen, musicians, dancers, artisans, oilmen, sweepers, fakirs, Sikhs.

Thugs worshipped the pickaxe which they carried for interring the dead.

The belonging to a Thug association is now an offence punishable with penal servitude for life, and Thugs may be tried in any sessions court without reference to locality. In practice, however, there was a good deal of speciality in the procedure. The Thuggee officers had the powers both of police-officers and of magistrates, for the apprehension of criminals and their committal for trial, but when committed, the accused were publicly tried in the ordinary way. There were special lockups and jails, so that both before trial and after conviction Thugs were kept apart from other prisoners. The proceedings were not subject to the control of the ordinary supervising officers, and in the early stages of the inquiry they were kept secret, statements being privately recorded, as by a procurator-fiscal in Scotland. The essence of the whole system was the conditional or partial pardon of some, in consideration of the disclosures which they made. A man must always be convicted and sentenced first; then he had a promise of reprieve and partial pardon on condition that he made a free and full disclosure of all he knew; he was still to remain under police supervision, and was liable to be remanded to imprisonment for life if he failed to fulfil the terms. This system was so worked, that once a beginning was made the information in the hands of the authorities was rapidly enlarged, a general distrust of one another was engendered among the criminals, the Thug jail at Jubbulpur, and the approvers living about it, became a great repertoire of information for all India, and in the course of a few years the crime was almost wholly extirpated. It would be a great mistake to suppose that when the system was properly managed the evidence upon which action was taken was scant or doubtful; on the contrary, in these cases there was a nearer approach to a quasi-mathematical certainty than in almost any others. The statements of one man were checked by those of others hundreds of miles off, without a possibility of communication, and the evidence was made to prove itself by the discovery of the bodies in the places indicated, the verification of the facts and circumstances of murders previously unknown, the recovery of the property, and in many other ways. At the same time, it must be admitted that such a system could only be worked by extraordinarily skilful and discreet men, such as arise on special occasions of great necessity, and that if there was any laxness or want of the utmost exactitude and care, it was liable to the greatest abuse. Even such relaxation as always attends the long existence of any special machinery was fatal to its full efficiency. Such a system is and should necessarily be a temporary one to meet an emergency. The time came when there was not wanting reason to suppose that the keenness of the weapon had led to its abuse, and that in consequence of an exaggerated belief in the power of the informers they were in some instances enabled to levy a sort of blackmail. Still, the cure was effected, and India has been enabled to lay aside the machinery.

Colonel Sleeman, the head and mainspring of the Thuggee Department, published an account of the system of crime and the machinery used for its suppression.—*People of India; Saunders' Magazine*, 1852; *Tr. of Hind.* i. p. 373.

THUJA, a genus of plants belonging to the natural order Pinaceæ, of the section Cupresseæ. T. orientalis, *Linn.*, the Chinese arbor-vitæ, grows in Siberia, Nepal, China, and Japan; and T. excelsa, *Bong.*, also grows in Japan, along with T. pendula, *Lamb*, the weeping arbor-vitæ of Tartary. See Evergreens.

THUJA ORIENTALIS. *Linn.*

Biota orientalis. | Peh-shu, ... CHIN.

This tree and the Cupressus thyoides furnish the cypress woods so largely used by Chinese

upholsterers; and these, with other trees, Chinese gardeners delight to dwarf and train into all sorts of animal shapes. The leaves of T. orientalis are used as decorations and garnitures of presents, and as medicines. Its oily fruits are eaten.—*Smith.*

THUJOPSIS DOLABRATA, *S. and Z.*, a tree of Japan, called by the Japanese Asnero, is a very beautiful tree, growing to the height of 90 or 100 feet, very straight, and singularly regular in its tapering form.

T'HUL. HIND.

T'hur, ...	CHALD.	Sos, ...	GR.
Taarn, ...	DAN.	Tur, GR., PERS.,	WELSH.
Thurm, ...	GER.	Tor, ...	SAX.

T'hul is the general term by which the sand ridges of the Rajasthan deserts are designated. The term is identical with the tor, thur, and tull of other languages; thus the Coptic t'hul has the same meaning. T'hul in Hindustan is from the Sanskrit St'hala, meaning ground, a tract, a district, and t'hul is the term by which the people designate the sandy desert tracts. The desert running to the Indus is marked with t'hul, rooe, and sand ridges, or T'hul-ka-tiba, some of them being very lofty. T'hul means an arid, bare desert; rooe is equally expressive of desert, but implies the presence of natural vegetation, in fact, the jungle of the desert. The word Maroost'hali is compounded of the Sanskrit Mri, to die, and St'hali, arid or dry land; which last, in the corrupted dialect of those countries, becomes t'hul, denoting tracts particularly sterile, the converse of the Greek oasis. Each t'hul has its distinct denomination, as the t'hul of Kawar, the t'hul of Goga, etc.

T'hul are numerous in Western Marwar, which is a corruption of Maroo-war, classically Maroost'hali or Maroost'han, the region of death. It is also called Maroo-desa, the country of death, which is synonymous with Mor-d'hur used by the bards; and though the term Marwar is now restricted to the country subject to the Rahtor race, its ancient application was to the entire desert between the Sutlej and the ocean.

The *t'hul of the Looni* embraces the tracts on both sides of the river forming Jhalore and its dependencies. Jhalore is one of the most important divisions of Marwar, but the region south of the river cannot be included in the t'hul. When the Pramara race held paramount rule in Maroost'hali, Jhalore was one of the nine castles of Maroo. Jhalore has only the desert plants, the jhal, babul, and karil.

The *t'hul of Tirruroe* intervenes between that of Gogadeo and the frontier of Jeysulmir. The name is from Tar, moist, and Rooe. The t'hul of Khawur lies between Jeysulmir and Barmair, and abutting at Giraup into the desert of Dhat, is in the most remote angle of Marwar. The Sahrai find pasture for flocks of sheep and herds of buffaloes in this t'hul.

The *Malli-nat'h t'hul* is also called Barmair, formerly occupied by the Malli or Mallani, of Chauhan, or, as some declare, of Rahtor origin; great numbers of camels, the best in India, are reared here.

Kherd'hur, the land of Kher, from the kher plant, and from it also called Kherala and Kheraloo, the home of the Kher, was formerly occupied by the Gohil race, who robbed the caravans or kafila as they crossed the desert. The Rahtor race drove out the Gohil, who became the lords of Goga and Bhownaggar near the Gulf of Cambay, and till lately swept the ocean as far as Sofala or the Gold Coast, as pirates and slave-hunters. Junah and Chotun are two ancient towns. Between Barmair and Nuggur Goorah is one immense rooe, containing deep jungles of khyr or kher, kaijri, karil, keip, p'hok.

Gogadeo-ka-t'hul, the t'hul of Goga, a name celebrated in the heroic history of the Chauhans, is immediately north of Eendovati, and one description will suit both. The sand ridges (t'hul-ka-tiba) are very lofty in all this tract; very thinly inhabited; few villages; water far from the surface, and having considerable jungles.

The T'hul or desert of drift sand in the Sind-Sagar Doab, has Leia, Muzaffarnagar, Dehra Ghazi Khan, Jampore, and Dhoondoo on its skirts. The sand lies in huge wreaths and hillocks, the latter often reaching the height of 40 or 50 feet above the general level of the country, which is for the most part destitute of vegetation; a few of the leafless pogh bushes, with some jhund and bur or peeloo, also occur, and there are occasional oases. There are small patches of ground free from sand, like little valleys surrounded by low hills. The soil is everywhere strongly impregnated with kullur (impure nitrate of soda).—*Tod's Rajasthan*, ii. pp. 296-300; *Annals*, ii. p. 289; *Captain Dias in P. P.* 265 *of* 1861.

T'HUL. MAHR. A place or spot; but amongst agriculturists a place where the holder has dug a well, built a bund, or planted trees, or made such improvements as entitled him to the uninterrupted possession of such field.

THUL-i-TAUBA, ARAB., the hill of repentance, is on the Tigris, and is so named because of the tradition that when Jonah threatened the Ninevites, they went to this hill and vowed repentance. The Gaelic Tillee Beltein, *i.e.* the hillock of the fire of Baal, is a town in Perthshire, where the Beltane festival was held on old May-day.

THUNBERG, C. P., a Swedish botanist who visited Ceylon in 1777, author of the Flora Japonica, Lipsiæ 1784. He also resided in Java.

THUNBERGIA, a genus of climbing plants of the natural order Acanthaceæ, called after Thunberg. Amongst the species are T. alata of Zanzibar, T. angulata of Madagascar, T. fragrans of Hindustan and ghats of the Peninsula, T. grandiflora of all India, and T. coccinea, *Roxb.*, of Darjeeling. T. grandiflora has large flowers with no inner calyx; the leaves are angular, cordate; the anthers bearded and spurred. It hangs in beautiful blue racemes, and is adapted for covering trellis-work. T. fragrans has a climbing stem, with cordate acuminate leaves, somewhat angular at the base. A large beautiful creeper, N'way h'myo, BURM., with azure flowers, belonging to this genus Thunbergia, is a conspicuous plant in the forests of Burma. The species are handsome climbing plants, with a fragrant odour, with white, yellow, and blue flowers; they require a free, rich, sandy soil, and plenty of drainage. The large varieties with blue flowers should be planted out and trained upon pillars, trellises, or trees. Natives of the tropics; raised from seeds, cuttings, layers, and suckers.—*Rid.*; *Eng. Cyc.*; *Mas.*

THUOC, the Chinese Chih, cubit, or foot, and the generic name for the measure of length in Cochin-China, which varies according to circumstances. Those more commonly employed are—

	Metre.	Eng. Inches.
1. That used for measuring ships for the service of ports, ...	0·405	= 15·945255
2. That used for wood at Turon, ...	0·425	= 16·732675
3. That mentioned by Taberd in his valuable Anamitic Dictionary, ...	0·48726	= 19·18391346
4. That used by the king for measuring silks and other cloths in his transactions with foreigners, . . .	0·594	= 23·386374
5. That used by the natives in the Turon market, . .	0·61	= 24·01631
6. That used according to Morrison, ...	0·64968	= 25·57855128

—*Simmonds' Dictionary.*

THUPAWANSA, a Singhalese work containing an account of the death of Gautama Buddha, and of the manner in which his relics were disposed of.—*Hardy's Eastern Monachism*, p. 442.

THUYOPSIS DOLABRATA. *Sieb. and Zucc.* A majestic tree of Japan, attaining a height of 50 feet, with a stem 3 feet in diameter. It is of conical shape and drooping habit, delights in shaded and rather moist situations, and is used in China and Japan for avenues. It furnishes an excellent hard timber of a red colour.—*Von Mueller.*

THWAITES, JOHN, LL.D., an eminent botanist, long resident in Ceylon. He wrote a work on the plants of Ceylon. He was a doctor of medicine, and a fellow of many colleges. He died 17th June 1876, at Radcliffe House, Slave Island, Ceylon.

THYA, wife of Amenhotep III., on his demise succeeded to the regency of Egypt, during the minority of her son Amenhotep IV. He was the 9th king of the 18th dynasty, which began to reign about B.C. 1700. Amenhotep and Shoo-en-Aten, or slave of the disc, are supposed to be the same person, and he is figured at Tel-ul-Amarna. In him the line became extinct.

THYATIRA, now Ak Hissar. There is here a large sarcophagus just outside the town, with a long inscription to Scipio.

THYKA EUCHARIS, with species of cassida (tortoise beetles or ladybirds), species of sphix, coccinella, haltica, and locusta, are insects which attack the cold-weather or rabi crops in Lower Bengal.

THYMELACEÆ. *Lindl.* The Mezereum tribe of plants. The genera occurring in India are—Daphne, Linostoma, and Cansjera. Daphne viridiflora, *Wall.*, occurs in China; D. cannabina, *Lour.*, grows in Nepal and Cochin-China, and a soft, smooth, and tough paper, the celebrated Nepal paper, is made from its inner bark. This order of plants is very uniform in character, and is formed of shrubs or herbs with simple and alternate leaves, axillary or terminal flowers. An acrid stimulant principle abounds in most of the species hitherto examined, which possesses very valuable medicinal properties, though not devoid of dangerous powers, if taken in excessive doses. A crystalline substance named daphnine has also been separated from the bark of some species of daphne.—*O'Shaughnessy*, p. 599; *Voigt.*

THYMUS VULGARIS. *Linn.* Garden thyme.

Hasha, ... ARAB. | Ipar, ... HIND.

An erect plant, sometimes procumbent at the base, or clothed with a hoary pubescence. It is a native of the S.W. parts of Europe, in dry plains and on hills and uncultivated places free from woods. It has a pungent aromatic odour and taste, is cultivated for culinary purposes, used in soups, etc., and many varieties of it are met with in gardens. It is a delicate plant to rear; best by seed, grown in pots, but it may be increased by slips and dividing the root. It requires a sandy soil and free drainage.—*Riddell; Jaffrey.*

THYRSUS of Bacchus was brought by him from the east.

TIAGAR or Tiyagar Drug, a village and old fort in the South Arcot district of Madras, situated in lat. 11° 44′ 20″ N., and long. 79° 7′ 15″ E., 30 miles south of Trinomalai. Population (1871), 419. Between 1757 and 1780 it was regularly invested five times, and blockaded once; and although never carried by assault, it repeatedly changed hands between the British, French, and Mysore rulers. In 1790, Captain Flint, the defender of Wandiwash, beat off Tipu in two assaults on this town.—*Imp. Gaz.*

TIARIDIUM INDICUM. *Schm.*

Heliotropium Indicum, *L.* | H. cordifolium, *Mœnch.*

Hati shuru, . . . BENG.	Srihastini, . . . SANSK.
Indian turnsol, . ENG.	Bhurumdi, . . . ,,
Siriari, ... HIND.	Tel koduku, . . . TAM.
Benja patsja, . MALEAL.	Tal mani, ... TEL.

This annual plant grows in Chittagong and Travancore amongst rubbish in rich and rank soils. The juice of the leaves is applied to painful gum-boils and to repel pimples on the face; also used in inflamed or excoriated tarsi. In Jamaica it is used with castor-oil to relieve the pain of scorpion stings, and in the treatment of hydrophobia.—*O'Sh.* p. 497.

TIAU. CHIN. A string of copper coins varying in number from 160 to 1000.

TIBA, in the Panjab, inferior, sandy, dry soil. Tiba means hillock, and the term is especially applied to uneven sandy ground of a somewhat high level. See Bhur; T'hul.

TIBABAT, also Tibb. ARAB. The science of medicine. Tabib, a physician.

TIBBOO, a language of Northern Africa, spoken as far west as Fezzan and as far north as the oases of Angila and Siwah. The Tibboo of Lyon and Hodgson seems to belong to the Nubian class, and to be Libyan or Lybes.—*Latham, Rep. Brit. Ass.*, 1847.

TIBERIAS, a lake in Palestine, called the Sea of Galilee, from its situation on the western borders of that division of Palestine; the Lake of Gennesareth, from the neighbouring land of the same name; and Sea of Tiberias, from the contiguous city of Tiberias, now known by the name of Tabaria, the only large city existing on its shores. The lake is about 15 miles in length, and 6 to 9 in breadth. Lake Tiberias was the scene of one of Jesus Christ's miracles, Luke viii. 23, 24. The town of Tiberias is situated on its western shore. About a mile from the town, and close to the edge of the lake, are some hot springs enclosed by a small square stone building surmounted by a dome. Their waters consist of a strong solution of muriate of soda with a considerable intermixture of iron and sulphur. There are several other springs in the immediate neighbourhood, but they are not turned to account. The

place is known by the name of El Hamam, the baths. Its ancient Hebrew name, Emmaus, has a similar signification. The extreme depth of this lake, about 250 metres, is at its northern extremity, near where the Jordan enters it. The surface is 212 metres below the level of the Mediterranean, but the sides afford evidence that it must formerly have been level with that sea. Fishes of the genus chromis swarm in the lake (seven species were met with). The male of this fish is known to hatch its eggs by keeping them in the mouth and gills, and the young remain there some time after hatching.—*Robinson's Travels*, i. p. 124.

TIBET, a region in Central Asia, lying between lat. 27° and 37° N., and long. 72° and 105° E.; extends from Badakhshan in the N.W. to Sze-chuen in the S.E. The Gobi desert on the N. separates it from the eastern portion of Chinese Turkestan; it has the territory of the Eluths of Koko Nor on the N.E., the territory of the Si-fan or Tu-fan and Sze-chuen on the E., Yunnan is on the S.E., on the S. is the valley of Assam, Burma, Bhutan, Nepal, and British India, and on the W. is Little Tibet.

Tibet was reckoned by Gutzlaff in his Life of the Emperor Taou Kwang, p. 227, to comprise an area of 30,200 square miles, and to have a population of about six millions. Its table-land in the E. is about 4000 feet above the sea, but in Little Tibet it is between 11,000 and 12,000 feet.

Tibet is called by the Chinese Tsang or Si Tang, the word Tibet being from Tu-peh-teh (Tu-Bod). The Tibetans also designate their country Bod-Yul, as the Chinese likewise name it Fu-Kwoh, the land of Buddha. Mr. Trelawney Saunders explains that the Indian name is Bhot. Its native name is pronounced Pot, but properly Bod, which denotes both the nation and the country; but for distinction the country is called Bod-yul (Bod-land), a man of the country Bod-pa, and a woman Bod-mo.

The Tibetans, however, apply the name Pot or Bod to Middle Tibet, or to the two provinces U and Tsang (Duus-Otsang, pronounced U-tsang), the capitals of which are H'lassa and Zhikatse; hence a native of these two provinces is called by them especially Pot-pa.

The eastern part of Tibet is called K'ham or K'ham Yul, also Great Tibet.

The N.W. part, towards Ladakh, is called Nari.

Bhutan is, however, known to the Tibetans by several names,—Lho-pa-to, Lho-mon-k'ha-zhi, and Lho-bruk-pe-yul, or simply Lho, the south.

According to these divisions, Pot-pa or U-tsang-pa means a native of Middle Tibet; Kham-pa or Kham-ba, one of Eastern Tibet; Nari-pa, one of Western Tibet; and Lho-pa, a native of Bhutan.

The Chinese Government divides Tibet into two provinces, Anterior Tibet and Ulterior Tibet; but their maps retain the three divisions above mentioned.

U and K'ham are now styled Tsien Tsang, while Tsang and Nari (or Ari) are called Hall-Tsang, *i.e.* Ulterior Tibet.

Nari (Mnahris) is the most elevated, and gives rise to the sources of the Indus, Sutlej, Gogra, and Brahmaputra.

The Turk and Mongol races on the north of Tibet are called by the Tibetans Hor and Sok-Po (Hor-Sok). China (Gyanak, Tib.) is on the east; India (Gyagar, Tib.) is on the south. The hill people of India who dwell next to the Tibetans, are called by them by the general name of Mon, their country Mon Yul, a man Mon-pa or simply Mon, and a woman Mon-mo.

U-tsang is Tibet proper, and lies north of Assam, Bhutan, and Nepal, and has about 130,000 families. Its capital is H'lassa.

K'ham-Yul (K'hams-Yul), called also Pot-ch'hen or Great Tibet, has China on its east. Its people are called Pon or Bon.

The northern part from Tsang to Ladakh is called Nari. The people are said to number 10,000 families.

Its four territorial provinces are—

Tsien Tsang, or Anterior Tibet, also known as Kham and Kham-do. It is nearest to the Chinese frontier.

Wei or *Chung Tsang*, Central Tibet, containing the seat of government, Lhassa, and the residence of the Dalai Lama, the great monastery of Potala.

How Tsang, Ulterior Tibet, or simply Tsang, containing the seat of government of the Panshen Lama, at Teshilumbo or Chashilumbo.

Gnari, Western Tibet.

Tibet is now governed by China through the Buddhist hierarch, the Dalai Lama, and in this manner it is a dependency of China.

Its present limits comprise only a part of the ancient region of T'u Fan, the people of which, the Si Fan and Tang-ku-teh (Tangut) were for many centuries the dreaded enemies of the Chinese. Legends attribute to the Sakya the civilising of the races, but their first historic king was Srongtsau Gampo, the seventh of the Sakya rulers, who introduced Buddhism, and brought all Tibet under his sway. He married a daughter of the Nepal sovereign (Pai-pu or Pa-pu-leh Kwoh, *i.e.* the Parbattiah kingdom), and also in A.D. 641 the princess Wen-Cheng, daughter of the emperor Tai Tsung of the Tang dynasty in China. For many centuries his descendants, with the title of Gialbo (in Chinese Tsan-pu) ruled over Tibet, but the Buddhist hierarchy gradually encroached, and in the 11th century the Sakya religionists began to usurp the exclusive power of the state. From that period the Sakya priesthood have been known as the Brug-pa, though also now designated Hung Kiao or the Red Church. The Sakya priesthood introduced marriage; but in the 15th century, Tsong-kha-ba, born A.D. 1417 at Si King, preached the celibate views of Sakya Muni, and insisted on the adoption of yellow robes. Before his death (A.D. 1478) he was the recognised spiritual leader of the Lamaist majority, and was acknowledged by the Ming emperor, who gladly welcomed him, as the Red Hierarchy had favoured supporters of the descendants of Kublai. The reformer left behind him two eminent disciples, on whom he laid commands, enjoining upon them that they should be born again generation after generation, as hubil'han, to practise the doctrines of the Great Conveyance (Ta-ch'eng, in Sanskrit Mahayana, the esoteric form of Buddhism). Hubil'han, in Chinese Hwa-shen, means transformed body, transformation, re-embodiment. The two disciples were designated respectively Dalai Lama and Panshen Lama. From that time the spiritual and a large portion of the temporal authority in Tibet, which had previously been engrossed by the Red Hierarchy, has been wielded by the suc-

cessive re-embodiments of Tsong-kha-ba's disciples, whose identity, on their reappearance in human form, has been merged, according to the legends that have subsequently arisen, in the personality of the two most exalted and revered of the divinities proceeding from the essence of Buddha himself. In the senior of the two, the Dalai Lama, the Bodhisattwa Avalokiteswara (the Chinese Kwan Yin) is believed to appear on earth; and in the person of the second, the Bodhisattwa Manchusri is recognised, this deity having preliminarily occupied the form, it is also fabled, of Tsong-kha-ba himself. The second in succession of the Dalai Lamas, in the course of a long career, laid the foundation of the existing hierarchical system in Tibet, establishing his seat of ecclesiastical rule at Lhassa, and organizing a body of lesser spiritual dignitaries, under the designation Hut-ukht'u, who, like the two supreme religious chiefs, were to be continued by a series of re-embodiments. Like the Dalai and Panshen Lamas, these spiritual chiefs of the Tibetan priesthood became popularly known as 'living Buddhas,' in Chinese Hwoh Fu, a term by which they are at present commonly designated. During the latter half of the 17th century, the authority of the Dalai Lama gained entire predominance in the greater portion of Tibet; the Gialbo or descendants of the ancient kings appear to have gradually faded into insignificance, whilst the authority of the Mongol princes grew more and more direct. Already, at a somewhat earlier period, Gushi Khan, the reigning prince of the Khoshot Mongols, had supported the Dalai Lama of the period against the claims of the reigning sovereign, and had been rewarded with the title of Nomen 'Han, or Prince (khan) of the Religious Law, an equivalent to the Sanskrit Dharma Raja. By the influence of Gushi Khan, the Dalai and Panshen Lamas, in A.D. 1642, were induced to despatch an embassy with tenders of allegiance to the Manchu sovereign, whose forces were then on the eve of effecting the overthrow of the Ming dynasty in China; and from this period relations of intimacy took their rise, developing themselves in time into the assumption, on the part of the Chinese emperors, of the sovereign tutelage of the Buddhist papacy in Tibet. This consummation was hastened by the wars undertaken towards the close of the 17th and in the early part of the 18th centuries by the Sungar chieftains, for the subversion of the authority of the Dalai Lama. The temporal administrator who, as regent under the Dalai Lama, had long conducted the government of Tibet, with the title of Deba, ruler or chief, was invested by Kang Hi in A.D. 1694 with the title of Tu-pch-teh-kwoh-wang or king of Tibet. But the authority thus established was ere long attacked by an invasion of the Sungars, and the Chinese armies which were despatched hereupon for the liberation of Tibet remained as conquerors of the country. For a time the Government remained in the hands of puppet nominees of the Chinese emperor, but in 1725 an outbreak directed against one of these gave a pretext for the appointment of two High Commissioners to control the affairs of Tibet on behalf of the Chinese Government. Further attempts at revolt led, in 1750, to the entire suppression of the temporal sovereignty in Tibet, and the government of the country was placed, thenceforward, in the hands of the Dalai and Panshen Lamas, aided by a council of four laymen, entitled Kalon or Kablon, *i.e.* Ministers of State, under the direction in chief of the two Imperial Commissioners or Residents appointed from Pekin. The government there, from that time forward, continued to be conducted on this basis, the authority of the Chinese administration being rendered the more complete by the long minorities which are entailed at each successive re-embodiment of the two supreme ecclesiastical dignitaries.

Yul-Sung or Lhassa, the residence of the Grand Lama, is the capital of Bhutan or Northern or Upper Tibet, also called Eastern Tibet and Tibet Proper.

Leh or Ladakh is the chief town of that part called Middle Tibet, called also Western Tibet; and Iskardo is the principal place in Little Tibet or Balti. The natives of Little Tibet describe Ladakh, Iskardo, Khaybalu, Purik, Nagyr, Gilghit, and Astor as distinct Tibets. Balti includes Hasora, Rongdo, Rong-yul, Shagar, Iskardo, Balti, Parkuta, Tolti, Khartaksho, Kiris, Khaybalu, and Chorbat. Ladakh includes Spiti, Zangskar, Purik, Suru, Hembako (Dras), Ladakh proper or Leh, Nubra, Rong, Rupshu, and Hanle.

Balti and Rongdo are on the Indus; Khartaksho, Tolti, and Parkuta are on the Sing-ge-chu; Shagar is on the Shagar; and Khaybalu, Chorbat, and Kiris on the Shayok.

Tibet includes the mountain valleys of the Indus and Brahmaputra, together with the whole axis of the Himalayas, and the heads of many of the valleys which descend on the Indian side, and which are situated beyond the mass of snow throughout a great part of the chain. Beyond the Indus and Brahmaputra are the southern slopes of the Kouen Lun.

The Tibetans do not recognise a continuous chain of mountains running parallel to the Himalaya; nor are they acquainted with Kouen Lun as the name of any mountain range. They are familiar with the Himalaya on the one hand, and call it Kangri, which simply means snowy region, and they know that the country of the Mongols or Mongolia lies parallel to it on the other hand.

Western Tibet is a country of such general elevation, that only in the province of Balti are villages to be found below a height of 6000 feet.

In 1845, a great earthquake was experienced in the province of Kham north-east of Lhassa. It was most severe in the district of the Dirgi Raja. About 3000 men were killed and a Gumba destroyed by the opening of the earth. About the year 1820, the district of Komp in the province of Kham was visited by a severe shock; one village was destroyed by the opening of the ground.

The routes from British India to Tibet are the Nilanghat pass at the eastern corner of Native Garhwal (Tchri), the Mana pass and Niti pass in British Garhwal, the Johar pass in Kamaon, and the Darma and Byans passes in Kamaon and at the extreme east of the Kamaon-Tibet frontier. The great Tibet road from India to Central Asia runs in the gorge through which the Sutlej passes.

Tibet is mentioned by Abu Zaid-ul-Hasan in A.D. 915, by Ibn Haukal in A.D. 950, by Abu Rahan in A.D. 1030, and by Edrisi in A.D. 1154.

Also the Jesuit fathers Grueber and Dorville returned from China by that route in A.D. 1661, just 400 years after Marco Polo's journey westward. They were the first Christians of Europe who are known to have penetrated into the populous parts of Tibet.

Fathers Andrada, Desideri, Horace de la Peuna (1742), the monk Cassiano, Father Giorgi (1762). In 1774 Mr. George Bogle, and in 1783 Captain Turner, were sent on embassies, and in 1828 Father Hyacinth published in St. Petersburg a Chinese account of it.

In the 18th century China took the Ba-thang and Ly-thang provinces and added them to Szechuen, and added those of A-tsu-tze and Tcongtien to Yunnan. Since then Ladakh has been annexed to British India. On the other hand, in 1863–64, Tibet annexed the De-gné country.

During the progress of the first war with Bhutan in 1772, the British, having defeated their army with loss at the battle of Chichakotta, and driven the main body of the Bhutanese into the mountains, was threatening the capital Tassisudon. In these straits the Deb raja of Bhutan appealed to the Teshu Lama of Tibet for assistance. The Teshu admitted that the raja of Bhutan had deserved all punishment, 'as he is of a rude and ignorant race; and past times are not destitute of instances of his faults, which his avarice has tempted him to commit.' 'The Lama had reprimanded and admonished him to be submissive in the future; but as he has been thoroughly beaten, and is a dependent of the Lama's, the Teshu intercedes, declaring that further punishment would irritate both the Lama and all his subjects.' 'As to my part, I am but a poor fakir; and it is the custom of my sect, with the rosary in our hands, to pray for the welfare of all mankind. . . . And I do now, with my head uncovered, entreat that you will desist from all hostilities.' Hastings did desist, and it gave him a pretext for sending Mr. Bogle on a mission by way of reply. Mr. Bogle so won the friendship of the Teshu Lama, that when, a year or two afterwards, the latter, at the urgent request of the emperor of China, went to pay him a visit, and was received with all the honours of a divine person, he twice recommended the British to the gracious notice of the Brother of the Sun.

Csoma de Koros resided for many years in the country, engaged in philological inquiries. Drs. Thomson and Hooker and Lieutenant Strachey added largely to the knowledge of the country; and a convention agreed to at Chefoo by Sir Thomas Wade makes express provision for a British embassy to proceed to Lhassa, the capital of Tibet.

Races.—The inhabitants all belong to the Mongolian family. As a general rule, the Himalaya divide Hindustan from Bhotland, but there are Bhot in several parts south of the crest of those mighty mountains, in Garhwal and Kamaon. M'hon is the name given in Tibet to all the hill people between the plains of India and Tibet. The Tibetans and Nepalese are Mongols, and have all the characteristics of the Mongol race. The people of Leh, the Eastern Tibetans, call themselves Bhotia, or inhabitants of Bhot. They are not so tall and are stouter made than the Tibetans of Balti or Little Tibet. The Bhot of Ladakh is strong, hardy, short, and square, with a decidedly Mongol physiognomy,—by which is meant a flat face, broad cheek, depressed nose, very large ears, oblique and narrow eye curtained at the corners, black hair, and low stature, their average height being 5 feet 6·1 inches; the skulls are less Mongolian, having a capacity of 72 cubic inches, 80 cubic inches being a fair capacity for a European.

The Thorpa tribe dwell in Kara Tibet, S. of the Gobi. They are supposed to be descendants of the Uigur tribe.

The Hor or Hor-pa are a branch of the Eluth, dwelling to the north of Kara Nor, and are called by the Mongols, Saraigol or Karagol, and by the Tibetans, Sogh-po or nomades.

Mr. Brian Hodgson furnished vocabularies of the Si-fan and Hor-sok, and of the languages of Northern and South-Eastern Tibet, the Tho-chu, Lok-pa, Gyami, Gyarong, Hor-pa, Tak-pa, and Man-yak.

Trade.—All the inhabitants of the snow valleys trade; they reside from March until November in the valleys just under the ghats, where a scanty cultivation is carried on by their women, and whence the men take flour, rice, cotton, sugar, etc., into Tibet, bringing back borax, salt, and wool. But from November to March they abandon the Snowy Ranges for the banks of the Alaknanda about Kurupryag, Nandpryag, etc., and carry on interchanges with the traders at Najibabad. They use the Chour-gai or yak for transport; it carries 150 to 200 lbs. It is purchased at from 10 to 15 rupees. Gold, like all else of a yellow colour in Tibet, is sacred to the Grand Lama. The gravel of the northern steppes of Tibet yields gold in grains, but the value of the crude borax of the lakes surpasses, as an article of trade, that of the precious metal. Gold is found on the banks of the Basha stream in Little Tibet. Vigne had no doubt that the drun or marmot of Little Tibet are the 'ants as big as foxes,' noticed by Herodotus as throwing up gold. Nagyr is celebrated for its gold washings. Tavernier tells us (p. 156) that 'toward the Tibet, which is the ancient Caucasus, in the territories of a raja beyond the kingdom of Kashmir, there are three mountains close one by another, one of which produces excellent gold, the other granite, and the third lapis-lazuli.' Thokjalung, in latitude 32°, is the chief gold field of Western Tibet. It is a large desolate plain about 16,000 feet above the level of the sea; and in 1868 the pandit sent by Captain Montgomerie saw a nugget weighing 75 tolas, over 2 lbs. In Tibet the gold fields are said to extend from Rudok to Lhassa, or eleven degrees of longitude =700 miles. They also extend northerly to between Aksu and Ili. Numerous parts of Central Russia and China also contain gold.

Rank.—In Tibet, civil and military appointments are made by the Dalai Lama and the resident Chinese minister of Anterior Tibet. Their grades are five, the highest being equivalent to the Chinese third, but the button which declares a rank in China is worn only by the Tangut, who appear to succeed only to hereditary offices; the Lama wear no button, by reason of the peculiarity of their head-dress. In Anterior Tibet are 10 ying, cantonments, or encampments classed as great, 43 as middle-sized, 25 as small, and 14 as frontier posts. In Ulterior Tibet are

14 middle-class and 15 small ying. The tsan-tsan are supported by a contingent of 646 luh-ying from Sze-chuen under a yukih, a tusze, three captains, and six subalterns, who are distributed through both provinces; the native soldiery are but 3000,—1000 in Anterior, 1000 in Ulterior Tibet, 500 at Pingjih, and 500 at Dziang. They are divided into small sections of 25 under a ting-fung; five of these make three tai-fungs' command; two of these, a yu-fung's; two of these, a tai-fung's; there are six of the last in Tibet.

Clothes.—Tibetans of the higher class wear Chinese satins in the warmer seasons, and the same lined with fur in the cold; all others wear woollens in the warm, furs and sheep-skins in the cold weather, and never go about without boots. The common people never wash during the cold season; very sparingly at other times. The reason given for this being that the skin of the face cracks and ulcerates from the cold, if water is applied to it. The people of towns, who do not go much outside the house, wash occasionally, but the prejudice is strong against ablutions of the person, and it is equally extended to their clothing, which is worn in a filthy and greasy state. Soap is high priced, but little used in Tibet. There is in the country a plant resembling grass, the root of which, pounded with water, makes a lather, and is used for washing clothes.

The tea trade of Tibet is carried on in the form of blocks, weighing about 8 lbs., and which sell at from 12 to 48 shillings each.

Population in Tibet is sparse, the greater portion of the inhabitants living at heights varying between 9000 and 11,000 feet. Leh, the capital of Ladakh, and one of the most important commercial places of Western Tibet, lies 11,527 feet above the level of the sea. Gartok, on the Indus, is at a height of 15,090 feet. Every year, in August, a large fair is held there by several thousands of natives from almost every part of the Himalaya and Central Asia. The people encamp in the black or coloured cloth tents. This is certainly the greatest height at which man is known to congregate for mercantile purposes. Some of the other Tibetan summer villages, as Norbu (15,946 feet) and Puga (15,264 feet), are built on sites near which salt and borax are found, and serve only as occasional sheltering-places to shepherds.

Tibet has long been famous throughout Asia, and even in Europe, for its numerous herds of sheep, and the superior quality of the wool which they provide; with the rearing of these herds many of its inhabitants are exclusively occupied. In summer, the flocks are driven to pasture grounds, some of which reach an elevation of 15,000 to 16,349 feet, beyond which the Tibetan shepherds never venture.

In the Kouen Lun, even the foot of its southern (Tibetan) slopes is so elevated, that no villages or pasture grounds exist at all. On its northern slopes, 9400 feet is the limit of permanently inhabited villages (Bushia, 9310 feet); summer villages reach about 10,200 feet; and pasture grounds do not occur above 13,000 feet.

Religions.—Buddhism is the prevailing form. The people of Ladakh are Buddhists; those of Little Tibet are Shiah Muhammadans. Lama is the title of the monastic priesthood. In Tibet there are two ruling Lamas, the Dalai and the Teshu Lama. The former is the chief, and resides at Lhassa; the latter, the inferior, in the lamasery of Teshu Lumbo, near the town of Shigatze, on the river Sanpu or Brahmaputra, in the south of Tibet. The ordinary monk or priest in Tibet is the Gylong, above whom are the Lama or presidents, and below whom are the Tohba and Tuppa. The Tuppa is a probationer who is admitted into the establishment, to which he would attach himself at the age of 8 or 10, and receives instruction accordingly. At 15 he becomes a Tohba, and at 24 a Gylong, provided his acquirements be satisfactory. There are two sects, the Gyllupka, who dress in yellow, and the Shammar in red, the Shammar Gylong being allowed to marry.

Besides their Lamas, the Tibetan Buddhists have large numbers of nuns among them, who are not, however, subjected to restraint, but work actively in the fields, and one of them took service for a short distance as a coolie with Captain Knight's party. Slavery is a Tibetan institution. Polyandry is common.

Language.—Brother H. A. Jaschke of Herrnhuth finished the Tibetan-English Dictionary, on which he was engaged on behalf of the India Office for a period of eight years. Alexander Csoma de Koros dwelt for many years in Tibet, writing a dictionary. The sacred books of Tibet are in 100 to 108 vols. folio.

In Tibet, the cycle of Jupiter, Vrihaspati Chakra, is used. Their epoch occurs in A.D. 1025. Csoma de Koros mentions that in the Tibetan sacred books, three periods of their compilation are expressly stated, first under Sakya (B.C. 638 to 543); then under Asoka, king of Pataliputra, 110 years after the decease of Sakya; lastly by Kanishka, upwards of 400 years after Sakya. Boom, a Tibetan work in 12 volumes, contains tracts of the Elupka section.

Fairs.—There are twelve great annual festivals, viz. Bumteung, Kausupecha, Chushupecha, Gesupecha, Nesupecha, Gosungpecha, Gyajipecha, Lallupecha, Chindupecha, Dudupecha, Kagyurpecha, Lukphopecha. On the anniversary of the death of a chief Lama of a Gumba, there is a great festival and illumination. At Teshu Lumbu, three such are held annually. The Lhassea Morun festival of M. Huc is properly called the Lha-sa Meuhlum. It is the anniversary of the first proclamation of the religion of Buddha by Sakya at Lhassa.

Burials.—The Ch'hod-ten is a Buddhist temple. There are numerous Ch'hod-ten in Tibet, consecrated to the celestial Buddha, in contradistinction to the Dungten, which are built in honour of the deceased holy men, as a bone or relic receptacle.

In Tibet, where the dead are not burned or buried, but are exposed on high places to be devoured by vultures, there is a class of men who make removal of the dead their sole avocation. They are called Raga Tongden; they are a low race, held in dislike, and shunned, but they are generally rich. They go about to the living, begging and extorting money. When refused or ill-treated, they retaliate with abuse, which is often successful. 'Very good,' say they, 'you won't give us alms now: you will come into our hands some day, and we will put a rope round your neck, drag your body through

the streets, and throw it to the dogs;' and the latter part is the frequent fate of the poor man's body, as these men keep numerous dogs to devour the bodies. The bodies of the wealthy are carefully disposed of: they are carried in a litter to the top of a hill set apart for the purpose, the flesh cut in pieces, the skull and bones pounded in a mortar; and when all is ready a smoke is raised to attract the vultures, who collect in thousands to eat it up. The sovereign Lamas are, however, deposited entire in shrines prepared for their remains, which are ever afterwards regarded as sacred, and visited with religious awe. The bodies of the inferior Lamas are usually burned, and their ashes preserved in little metallic idols, to which places are assigned in their sacred cabinets. Ordinary persons are treated with less ceremony: some are carried to lofty eminences, where they are left to be devoured by ravens, kites, and other carnivorous animals. But they also have places surrounded by walls where the dead are placed. The Mongols sometimes bury their dead; often they leave them exposed in their coffins, or cover them with stones, paying regard to the sign under which the deceased was born, his age, the day and hour of his death, which determine the mode in which he is to be interred. For this purpose they consult some books, which are explained to them by the Lamas. Sometimes they burn the corpse, or leave it exposed to the birds and wild beasts. Children who die suddenly are left by their parents on the road. In Spiti, in the N.W. Himalaya, when a person dies, the body is sometimes buried, or burned, or thrown into the river, or cut into small pieces and burned. Admonitions are made over the body to the departed spirit, such as, Do not trouble yourself, you cannot enter it (meaning the dead body); in summer it quickly becomes corrupt, in winter it freezes and is too cold for you.

Marco Polo, writing in the 13th century, related that in Tibet they eat raw meat and worship images, and have no shame respecting their wives. In ancient times, according to Herodotus (Prinsep, p. 1), the Tibetans at the Persian court stated that they ate their dead. According to Dr. Scott (Asiatic Researches xv.), when the Bhoti of Upper Tibet fought with a Deb raja or governor, or with Pilos, if any one be killed, both parties rushed to obtain the body, and the successful party took out the liver and ate it with butter and sugar. They also mixed the fat and blood with turpentine, and made candles, which they burned before their idols. The bones of persons killed in war were used for musical pipes. They made beads from the skulls, or set them in silver as water cups to be used in their religious ceremonials. These are doubtless fables.

The Chinese have spacious burial-grounds at Lhassa and Digarchi, and there, as in their own country and wherever they reside, they are well cared for and ornamented. The Lhassa one is said to contain 100,000 tombs. In the time of Wangh, a celebrated raja of Lhassa, there was an insurrection against the Chinese, which ended for the time in the annihilation of the whole army, and the massacre, by the Tibetans, of the whole Chinese population. The funerals of the Chinese at that time were estimated at 4000. This massacre was punished by the emperor, and since that time the Chinese supremacy has been finally established all over Tibet. There was a petty insurrection in 1843, in which many Chinese were killed.—*Hooker*, i. p. 118; *Moorcroft's Travels; Cunningham's Sikhs; Journ. Ind. Arch.; Dr. Thomson's Tr.; Campbell; Timkowski; H. and Th. Flora Indica; A. Cunningham in J. A. S. of Bengal*, 1855; *Prin. Indian Antiq.; Rennell's Memoir; Trelawney Saunders' Geog. Mag.*, 1877; *Mayer, Chin. Govt.; Wade's Chinese Army*, 71, 72.

TIBIT, the term in use among the Uzbak of Yarkand for the pashm or wool of the shawl goat. Lieut. Henry Strachey supposed it to be the source of the geographical term Tibet, introduced to Europe by Marco Polo.

TICHODROMUS MURURIA, the wall creeper of S. Europe, is very common in the Himalaya, Afghanistan, etc., in rocky situations, and on the scarped sides of mountain roads. At a distance it looks like a very large grey and scarlet butterfly, as with expanded wings it noiselessly creeps over the rock, poking its long awl-shaped bill into every little nook and crevice.—*Adams.*

TICK, species of Ixodes.

TICKEL, Colonel, 31st B.N.I., wrote on the Birds of Borabhum and Dhalbum in Bl. As. Trans., 1833, ii. p. 569, and contributed largely to the stock of knowledge regarding the ornithology of Central India and Burma.

TIC-POLONGA, a name given in Ceylon to a poisonous snake about three or four feet long.

TID. Hind. A beggar's fiddle, a musical instrument.

TIDES. The usual vertical rise and fall of the tides along the shores of the Peninsula of India is small. In the Straits of Malacca and at Singapore it is from 12 to 14 feet; while in other parts of the world, in the same latitude, there is scarcely any variation. Upon the coast of Cochin-China it varies from 6 to 14 feet, and the periods and duration of the ebb and flood are by no means regular. In lat. 12°, on the same shore, there is but one tide in the course of 24 hours. At the head of the Gulf of Cambay, in lat. 22°, Horsburgh states that the perpendicular depth of the rise and fall of the tides is from 36 feet at the full and change of the moon. Also, in Surat road, it is from 20 to 21 feet, and from 15 to 17 in Bombay harbour; again, in the Gulf of Martaban, which is far within the tropics, the rise and fall of the tide, at the full and change of the moon, is 23 and 24 feet, and at Rangoon bar about 20 or 21 feet. In Gasper Straits, within 2½° of the equator, there is occasionally, from local causes, a rise and fall of 16 or 17 feet on the spring-tide, but this is rare in other places so near the equator. These instances show that very considerable tides occur within the tropics.

The range of the tides, however, greatly varies, from 1½ feet in the open ocean at the Mauritius to 20 feet at Rangoon, 21 feet at Mergui and Martaban, and 30 feet at Surat.

	lat.	long.	ft.
Balasore,	21° 28′ N.	87° 0′	10
Bassein, .	19° 18′ ,,	72° 49′	17
Bombay, .	18° 54′ ,,	72° 48′	12
Beyt, . .	22° 28½′ ,,	69° 9′	14
Chittagong,	22° 20′ ,,	91° 48′	15
Daman Bay,	20° 22′ ,,	72° 49′	17
Kishm Is.,	26° 57′ ,,	56° 17′	12
Makomba,	15° 42′ S.	45° 58′	17

	lat.	long.	ft.
Martaban,	16° 32′ N.	97° 35′	21
Mallinda, .	3° 15′ S.	40° 11′	11
Rajapur, .	18° 16′ N.	73° 0′	12
Rangoon,	16° 47′ ,,	96° 10′	20
Surat, . .	21° 12′ ,,	72° 47′	30
Tavoy Is.,	15° 0′ ,,	98° 14′	17
Versava, .	19° 7′ ,,	72° 46′	12
Zanzibar,	6° 9′ S.	39° 14′	10

—*American Exped.* p. 148; *Horsburgh.*

TIEFFENTALLER, JOSEPH, a native of Bolzano, in the Austrian Tyrol, who arrived in India A.D. 1743, as a Jesuit missionary. He travelled extensively, and wrote, in Latin, accounts of the country. He died at Lucknow, July 1785, but was buried at Agra, at the back of the old Catholic church built by Walter Reinhardt. —*Growse.*

TIEH-FAN. CHIN. A ferruginous alum, also alum earth.—*Smith.*

TIELLA, in Malayala and Tamil, a tree which grows from eight to twelve inches in diameter. Its strong, durable wood is used by the natives in the frames of country boats.—*Edye, Ceylon.*

TIEN-CHU, or Celestial Kingdom, a Chinese designation of China proper. Tien-Shan-hu, CHIN., means the lake of the celestial hills. Tien-tsin, CHIN., means celestial harbour.

TIEN-CHUNG-CHING-SIT, the Chinese feast of the middle heaven.

TIEN-DZA. CHIN. A title of the emperor of China.

TIEN-HOU-SHENG-MU, the Chinese queen of heaven, is the patron of seafarers. Previous to the first trip of the fishing season, or when new nets are made or old ones mended, the nets are spread out, candles are lighted, joss paper and incense are burnt, and sacrifices offered to propitiate the goddess. Tien-Hou was a native of the province of Foh-kien, and a member of the clan Lum. Her four brothers were merchants, and it is fabled that when absent at sea, their ship met with a severe storm, and their sister in a trance visited the ship, and dragged it into a place of safety. On the return of the ship, the youngest son said the eldest brother had been drowned at sea, but a lady had appeared in mid-heaven, and by means of a rope dragged the ship into a safe position. She died at the age of twenty, and her relatives declared that her spirit returned to the house once a month, and they concluded she had become a goddess, and erected a temple to her. Her fame soon spread, and she is worshipped at all times by numerous votaries, especially by fishermen and sailors. Her natal day, the 3d of the 3d month, is her festival.—*Gray*, p. 161.

TIEN-I is the Chinese celestial cure, a star supposed to have a beneficial influence upon invalids.

TIEN-PAK or Tien-pe-Hien is the principal place on the south coast of China where salt is produced, and several hundred junks are annually employed in transporting it to Canton. —*Horsb.*

TIEN-SHAN, according to Russian explorers, is a great alpine region, extending far to the south of Lake Issyk Kul, and forming with the Pamir and the Himalayas the mountain centre of the whole Asiatic continent. The axis of this Tien-Shan alpine region is apparently from N.E. to S.W., the elevation gradually rising to the S. and E., and sinking on the side of Kashgar much more rapidly. Lake Issyk Kul is 5300 feet above the sea-level; Lake Son Kul, 9430 feet; and the Tchatyr Kul, 11,210 feet. The main ranges run from N.E. to S.W., but are cut by other smaller ones running from N.W. to S.E. The centre is not the highest; the highest part of the whole region is the plateau or range of Ak-Shiirsik. There are many peaks between 14,000 and 20,000 feet high. Khantengri, S.E. of the E. extremity of Issyk Kul, is estimated at over 24,000 feet.

The Tien-Shan or Celestial Mountains separate the Tarim from the Issyk Kul and Ili basins south and north, and stretch thence eastwards to about 120 miles east of Hami (Khamil), in long. 95° E. At this point the Tien-Shan consists of a single wedge, but expands westwards, and in the extreme west ramifies into several distinct branches, which spread out like a fan far into the Turkestan lowlands. Of these branches, the south-westernmost are the Alai and Trans-Alai, which stretch in parallel lines for 200 miles along the northern edge of the Pamir down to the Turkestan plains.

North of Khokand (Farghana), the most important western branch of the Tien-Shan are the Alexander mountains, 15,000 feet from the closed basin of Lake Issyk Kul.—*E. Schuyler, Turkestan*, ii. pp. 132, 133; *P. Arminius Vambery of Bokhara*, p. 13.

TIER, Teer, Teyar, a race in Malabar who form the mass of the field labourers, but their chief avocation is to collect and make coarse sugar from the juice of the palm. Their women are exceedingly pretty, with masses of long hair. They follow polyandric customs. Both men and women are generally handsome, with strong muscular frames; able to undergo much fatigue, and talkatively inclined. They do not encumber themselves with large wardrobes, a white cotton cloth wound round the waist, and reaching to the knees, being only necessary for their full-dress costume. The women sometimes carry a small piece of muslin over the shoulder, and draw it across the breast when a European approaches, but as white faces are not rare now-a-days, this habit is wearing out, and semi-nudity is the rule. A woman of easy virtue wears more decent apparel as a token of the laxity of her morals. Till lately Tyatti or females of the Tier caste did not lose caste by forming connections with rich and respectable foreigners. Since two or three have risen in the Government service to position they have put a stop to this practice.—*Markham*, 346.

TIFFIN. ANGLO-ARAB. Lunch, from Arabic Taffammun, refreshment.

TIFLIS, in lat. 41° 41′ 4″ N., and long. 44° 50′ 39″ E., is 6385 feet above the sea. It is the capital of the Russian Government of Georgia, and on both banks of the Kur river. The population of Tiflis is quite kaleidoscopic in the variety of its elements. Out of 104,024 inhabitants, 37,308 are Armenians, 20,390 Georgians, 10,574 Russians, 2186 Tartars, 2005 Germans, 1692 Persians, 1592 Poles, 1145 Jews, 388 Greeks, 293 Ossetes, 263 French, 227 Aissors, 163 Italians, 123 Turks, 123 Mingrelians, 81 English, Scotch, and Irish, 52 Lesghians, 37 Checs, 32 Gourians, 28 Swedes, 15 Lithuanians, 10 Latiches (?), 10 Roumanians, 9 Slovacs, and 8 Mordoins, Chouvaches, Kurds, and Circassians. The sexes are as unequally distributed; there are only 37,877 women to 66,147 men.—*MacGregor.*

TIGER.

Nimr, ...	ARAB.	Matcham, . . .	JAV.
Ch'ung, ...	CHIN.	Pilli, ...	TAM.
Bag, ...	HIND.		

Tigers occur throughout India, in the Malay Peninsula, Chinese Tartary, and Eastern Russia, but are unknown in China. The tiger uses its

fore-paw in self-defence and in fighting, but uses its teeth in catching its prey, grasping the neck. After killing, it frequently lets its prey remain till nightfall, when it returns to feed upon it.

The tiger ranges on the mountains of India up to 6000 and 7000 feet. In hot weather, it harbours near rivers, in thickets of long grass, brushwood, or amongst the tamarisk bushes of river islets. The tigers of Lower Bengal and Central India are particularly savage and ferocious. The average size of a full-grown male tiger is from 9 to 9½ feet, but occasionally in India a tiger is killed measuring 10 feet in length. On this point Lieut. Rice says (p. 50), 'This was the finest tiger we had yet killed; he measured 11 feet 11 inches, counting from the end of his nose, between the ears, to the tip of his tail. The largest tiger of all measured 12 feet 7½ inches long, and was stout in proportion, a perfect monster (p. 207); another measured 12 feet 2 inches, and was stout in proportion (p. 60); the largest tigress, 11½ feet [!] From the extraordinary amount of trouble she gave us before being killed, as well as from her great size, we all thought it must be a male tiger' (p. 213); another tigress is mentioned as 11 feet 1 or 2 inches (p. 216). Undoubtedly very extraordinary dimensions for tigresses to attain! The footprints of a very large tiger are noticed as 6 inches long by 5 wide. 'One tiger measured a few inches over 11 feet, and was exceedingly stout, with an extraordinary quantity of long hair about the face, and even had long curly locks down the back of his neck, much more so than in any we have before or since killed; this greatly added to his personal appearance.'

In 1881 (16th to 26th March), the Durbhungah shooting party shot for ten days, in Nepal and in North Bhagulpur, 12 tigers, 57 deer, 83 pigs, 7 hares, 7 floricans, besides smaller game, such as duck, partridge, snipe, and quail. The largest tiger measured 10 feet 5½ inches in length,—he was truly a monster animal. The largest tigress measured 9 feet 4 inches,—a very handsome and beautifully-marked animal.

Tigers catch the wild hog, the sambur and the spotted deer, and they often prey on cattle and seize villagers. They always retreat from opposition unless wounded or provoked. A herd of cattle will attack a tiger, and compel it to relinquish its prey. On one occasion, a herd of buffaloes rushed on a tiger that had seized their herd-boy, and compelled it to drop him. The wild boar sometimes kills a tiger. Tigers eat frogs, animals that die of disease, and also their own kind. They are partial to particular localities, and to old ruins, old temples, and three or four may be seen lying together on the tops of the walls. An old tiger will kill a cow about once a week, remaining near the carcase for two or three days, and sometimes longer, gnawing the bones before returning to its retreat.

Lieut. Rice mentions that, on skinning a dead tiger, 'we discovered a number of porcupine-quills in his feet, arms, and even face. These broken pieces of quill we had also met with on other occasions when skinning tigers, which proves that they must be fond of such food. The porcupine only feeds at night, when, doubtless, the tiger often meets him, and with a tap of his paw destroys him, in spite of his armour of quills.'

Tigers that have killed a man generally continue to take that food. In the Mandla district east from Jubbulpur, in 1856 and previous years, on an average between two or three hundred villagers were killed annually, and Jerdon found several villages of the Bastar country deserted owing to the ravages of tigers. Colonel Fraser thinks that Bastar is the great tiger nursery. The tiger is often hunted down by the wild dogs of India.

The Bhils declare that an old male tiger would certainly kill a young male if he caught him unawares at any time. Capt. M—— was once long kept awake at night at the town of Nundwass, by the terrible roaring of two large tigers, fighting over the body of a bullock one of them had just killed, close to the walls of the small town. Next morning a tiger was found dead by the bullock's side, and on following up some tracks a short distance, the inhabitants found another tiger also dead. Both were large males, covered with marks from each other's claws and teeth.

On one occasion, when following up a tiger's tracks, Lieut. Rice and his companions came upon a dead cheeta (or hunting leopard) that had just been killed by the tiger; he having, no doubt, surprised the cheeta asleep, for the marks of the tiger's claws, from which blood still was flowing, were quite plain on the body. On another occasion they found a hyæna that had been murdered by a tiger. The paw alone had been used to kill these victims, for there were no teeth-marks.

The tiger's presence is well known by the familiar yell of the kole balloo, or superannuated jackal; but it is at night mostly that his hideous voice is heard. The kole balloo is an aged, mangy, worn-out jackal, that has either left or been expelled his pack. Being perhaps prevented by his infirmities from any longer being able to get his own living by hunting in company with his fellows, he devotes himself to the service of some tiger. It is his business to discover and give warning of the whereabouts of any stray cattle or other animal he may find that will afford his royal master a meal, the remains of which, after the tiger has dined, he of course hopes will fall to his share.

Captain M—— says—'On one occasion we distinctly saw a large tiger by the clear moonlight several times pass and repass, within a score of paces from where we were sleeping out; in spite even, too, of the large fires kept burning around us, greatly to the terror of our servants, horses, and dogs. The old jackal howled frightfully all the while close at hand, and no doubt wondered when his meat would be got ready. We did not like to fire at this tiger, for fear, being but slightly wounded, he might charge among us; yet several times in the night he caused us to turn out and show a front. At last, towards dawn, he and the jackal took themselves off, to our great delight.' Jules Gerard, the famous French lion-slayer of North Africa, refers familiarly to the screech of the jackal, who generally follows the lion to eat the remnants of his meals.

A tigress has from two to four cubs at a birth, which remain with her till they are able to kill for themselves. A writer on this subject says—'I have shot seventeen tigresses enceinte, and have invariably found four cubs inside the mother.

I think my experience includes six or seven instances of this. But I have never seen more than three alive, and that number only at the stage of extreme babyhood, before they were old enough to begin hunting with their mother. In every instance that I have met with or heard of a tigress going about with half-grown cubs, the number of cubs has never exceeded two. From this you will see that my experience (small as it is) points to four as the normal number, of whom one or two are still-born, and to the number of cubs that survive extreme childhood being limited to two. The natives say that the father always eats one of his progeny.'

The clavicle of the tiger lies loosely imbedded among the muscles near the shoulder-joint, and is considered of great virtue by the natives of India. The whiskers are supposed to constitute a deadly poison, and are carefully burned off the instant the animal is killed; but in some parts of the south of India they are supposed to endow their possessor with unlimited power over the opposite sex; the claws are mounted in silver, and set as bracelets. The bones of the tiger, of the Leopardus brachyurus, and of the lynx, are sold in China, to form an ingredient in certain invigorating jellies, made of hartshorn and the plastron of the terrapin. Burmese and Malays eat the flesh of the tiger, for which they pay from 9d. to 1s. a lb., because they believe that by eating it they acquire the courage and sagacity of the tiger. The aborigines of Central India reverence, in a mild, inoffensive way, the sun, the moon, the tiger, and the bhoot or household spirits. They use tigers' claws as charms, and the most solemn oath of a Santal is on a tiger's skin.

In 1881 there were 647 persons killed by tigers in India, and how to destroy the tigers has been a subject of anxious thought in India. It is very difficult sometimes to make out a tiger when concealed in grass or bushes, for they will often lie very close, their skin being of the same colour as the dry grass and reeds around, while the stripes, even if seen, are easily mistaken for shadows cast by the strong glare of the sun.

Captain F. Nelson, of Siddapore and Pedda-cheroo, recommended poisoning tigers. Buffaloes or bullocks should be picketed in the most likely cross-paths in the jungle. As soon as one is killed, and any part eaten, a teaspoonful of strychnine should be inserted under the flap of the skin next the part eaten. The skin should be raised with a bamboo knife like a paper-cutter. No human hand should touch the carcase, and one person only should approach to insert the poison. A watcher in a tree would keep the vultures off till sunset, when he should quit the place. A writer says—'Australia has for years past most thoroughly dealt with the dingo or native dog,—I mean by the systematic use of strychnine. An Australian stockman troubled with the wild dog finishes his day's work by riding across country over which the dingo roams, trailing a paunch in an advanced state of decomposition, and he hangs at intervals upon the trees a bit of meat with a little strychnine enclosed in a slit cut in it. By these means over thousands of miles the wild dog has been absolutely extirpated, and many of the more recent settlers have scarcely ever seen one, in districts in which they were once abundant and most annoying.'

In Cochin-China, Malays obtain their livelihood by tiger-catching, the skin of this animal being valuable. Two Malays generally go in company, and travel over many parts of the country. Those who follow this business regularly, have chops or permits from the quong of Saigon, allowing them to build a hut for their use in any place they think fit. The hut is built on the top of four bamboos, from 15 to 20 feet high; and as the tiger cannot climb these, the two men can remain in it and watch their snares in safety. The snare consists of large leaves, or sometimes pieces of paper about six inches square, covered on one side with a substance of the same nature as bird-lime, and containing a poison, the smallest particle of which, getting into the animal's eyes, is said to cause instant and total blindness. They are laid about thickly, with the bird-limed side upwards, in the track of a tiger; and as surely as the animal puts his paw on one of the treacherous leaves, he becomes a victim; for, finding it stick to his foot, he shakes it, by which means other leaves adhere to it; he then probably rubs his paw over his head, in the attempt to rid himself of these leafy encumbrances, but they stick to his head and face; he then perhaps rolls himself on the ground, when he becomes fairly covered; and, while scratching and rubbing himself to get free, some of the poisonous bird-lime gets into his eyes, and blinds him. He growls and roars in agony, and this is the signal for his captors to come and despatch him. The Malays then skin the animal, and take away the parts of his body that may be valuable. They leave the carcase, well strewn with more leaves, as a bait for other tigers; they also ensnare other animals and birds in the same manner.—*Brown's Cochin-China; Jerdon; Blyth; Rice.*

TIGRIDIA CONCHIFLORA, the beautiful tiger flowers, open in the morning, and are of short duration; a second blossom appears on the same stem about the third day after the first has withered.—*Riddell.*

TIGRIS has two principal sources in Central Armenia, both of which spring from the southern slope of the Anti-Taurus, near those of the Araxes and Euphrates, and not very distant from that of the Halys. It was called Dijla by the Chaldæans; and the designation applied to it in the Scriptures is Hiddekel, a name which it bears at the present day among a large portion of the people living near its banks. The western branch rises at a spot which is about 20 miles westward of Arghani Maden; its course is north-eastward along the deep valley at the foot of the elevated ground of Kizan (4568 feet above the Black Sea), and, after having continued in the same direction towards the heart of Kurdistan, when a little more than 25 miles from the spring, it makes a sweep so as to take the direction of Arghani Maden, or nearly south.

Below Diyar Bekr the Tigris contains several islands. Its banks are thinly peopled, and the country about them is only partially cultivated; but the pasture grounds are rich, and well suited for the visits of the nomadic tribes which come occasionally to the river from the neighbouring countries. The windings of the Diyar Bekr river thus far have a length of rather more than 150 miles, whilst those of the tributary by Myafarekin are less than 100 miles. The Lesser Zab, or

Altun Su, is augmented by a considerable stream coming from Koh-i-Sanjak, a town of 1000 houses, and distant about 40 miles north, 35 miles east; from thence it becomes navigable by rafts. At their junction, the Tigris is about 500 yards broad, and a little below there is a kind of cataract, called Kelah, where the descent is so rapid that the river appears as it were to run down-hill. This place is much dreaded by the people when descending in boats; but it does not seem in reality to offer any serious impediment to the rafts so frequently passing between Mosul and Baghdad. After the Tigris has succeeded in forcing its way through the Hamrin Hills, at a spot called El-Fattha, on the left bank, there is an abundant supply of sulphur; and, directly opposite, naphtha rises in great quantities from the bed of the river. The Tigris may be considered as having an average width of 200 yards from Mosul to Baghdad, with a current in the high season of about 4¼ miles per hour. The country is highly cultivated from Mosul to Nimrud on both sides of the river; but from the latter place to Tekrit all cultivation nearly ceases; and it is but partially found in the tract along the river between Tekrit and Baghdad. The Tigris is navigable for rafts at certain seasons from the bridge of Diyar Bekr to Mosul, a distance of about 296 miles. Below the latter place it is more or less so throughout the year, and the descent to Baghdad is performed with ease and speed. Large rafts, supported by 200 or even 300 inflated skins, are much in use for the transport of goods, and when the merchants are on board, a small room is raised on the raft in order to give shelter from the sun and rain. During the flood season the voyage is performed in three or four days, whereas at another time it requires about fifteen days. The *Euphrates* steamer, under Lieutenant Lynch, went as high as the bund of Nimrud in 1838, and this officer made a map of the river, from Baghdad to Mosul, by trigonometrical operations between points which were determined by astronomical observations. The raft constructed to carry the Right Honourable John Sullivan from Mosul to Baghdad in 1781, was supported by 200 skins, and had on it a small cabin. Below the Tak-i-Kesra, or arch of Chosroes, and which marks the site of the ancient Ctesiphon, and a little lower down the remains of the ancient Seleucia, the continuations of the Tigris bear the well-known appellation of Shatt-ul-Dijla as far as Kut-ul-Amara, a small town on the left bank, nearly midway between Baghdad and Kurna, being about 178 miles by water from the former city, and 97½ miles directly S.S.E. from the latter. Lower down, after passing for about 40 miles through marshes and coming near the tomb of Ezra, the river resumes its former size and character, as it winds in the general southern direction to Kurna, which place is 232 miles from Kut-ul-Amara by the windings, and 144½ in direct distance. The whole course, thus briefly described, may be estimated at 1146 miles, which is little more than half the length of the sister stream, the Euphrates, from the sources of the latter to their junction at Kurna, but it discharges more water, owing to the numerous tributaries which it receives on its eastern side, among which may be particularly noticed the two Zab rivers, and the river Diyala. There are, however, only two feeders of any moment on the western side throughout the long distance from Diyar Bekr to Kurna. A considerable increase of the river Tigris takes place during the rains of November; subsequently it decreases, and swells irregularly at intervals, till the different feeders are bound up by the frost and snow of January in the Kurdistan mountains. This serious check retards for a time the swelling of the river, therefore its permanent rise, like that of the Euphrates, does not usually begin till the middle of March. There is an active commerce along the Tigris, between Basra and Baghdad, by means of large country boats, which go in fleets, and above the latter city it takes place chiefly by means of rafts from Mosul.

The regions through which the Tigris and Euphrates rivers run, and the countries intervening, have, since remote ages, been occupied by races who have taken a prominent place in history. Aram-Naharain is the Syria between the rivers of Genesis xxiv. 10 and Deuteronomy xxiii. 4. The greater part of what was called Mesopotamia in later times, constituted the territory of ancient Babel, and was the Aram-Naharain of Scripture. The same territory in Genesis xxviii. 2 is called Padan-aram, or Champagne Syria, both of which designations agree with the description of the country given by Strabo. He says that the Tigris washes the eastern side of Mesopotamia, and the river Euphrates its southern and western; whilst the Taurus separates it from Armenia on the north. Pliny is still more distinct: he says that Mesopotamia has the Tigris to the east, the Euphrates west, the Persian Gulf south, and the Taurus north, with a length of 800 miles and a breadth of 360 miles, the city of Charax being at the extremity of the gulf (lib. vi. c. xxvii). Mesopotamia extends above 10 degrees in longitude from Balis, in long. 38° 7′ 10″ E., to the estuary of the old Karun, in long. 48° 45′ 16″ E., and from the shores of the Persian Gulf, in 30°, to Sumeisat, in lat. 37° 31′ 5″ N.; its greatest width being about 170 miles from Jaber Castle to Husn Keifa, on the Tigris, and its extreme length nearly 735 miles. The irregular triangle thus formed has a superficies of nearly 76,117 square miles, including the shores of the gulf from the Pallacopas to the old Karun. The principal towns of Mesopotamia are Diyar Bekr, Husn Keifa, Jazireh, Mosul, Tekrit, Sammara, and Kut-ul-Amara along the Tigris; and along the Euphrates, Erzingan, Kemakh, Egin, Kebban Maden, Malatiya, Rum, Kal'ah, Bir, Rakka, Deir, Rawd, Anah, Hadisa-el-Uzz, Jibba, Diwaniya, Lamlun, Sheikh-ul-Shuyuk, and Kurna; in addition to Suverek, O'fa, Haran, Seroug, Ras-el-Ain, Mardin, Nisibis, Sinjar, El Hadhr, Kerbela, Mesjid Ali, Samawa, Zobeid, and many other villages, both in the mountains and along the streams, between the two great rivers. Grane or Quade, Mohammara, and Basra are the ports; and the last, being the principal, is next in importance to Baghdad, the capital.

Races.—The races that have ruled here from the most remote times have been many, and remnants are still to be traced of former dominant peoples in the varied languages still spoken. The inhabitants of the region at present consist of

Arabs, Osmanli Turks, Kurds, Turkomans, Syrians, Jews, and Christians. Arabic is the general language; Turkish, Kurdish, Chaldee, Syriac, and Syro-Chaldæan dialects being the exceptions. The Sunni Muhammadan religion is prevalent; but in Upper Mesopotamia there are many Nestorian Christians, some of whom have become Roman Catholics, and Jacobite as well as Roman Catholic Syrians.—*Rawlinson; Bunsen; Rich; Chesney.*

TIGULAR or Tigalar, a term by which the Canarese people designate the Tamil-speaking race.

TIKA. HIND. A round piece of clay, paint, or tissue on the forehead of a Hindu. The application of the tika is a royal rite, and Rajput chiefs claim it as the symbol of investiture; but amongst Hindus generally, it means the circular mark made with coloured earths or unguents upon the forehead. The rana of Udaipur, the raja of Jeypore, and raja of Bilaspur, have it applied to their foreheads as a token of supremacy.

TIKA. MAHR. A parcel of ground, a field.

TIKA. SANSK. A commentary. Most of the Siddhantas which have been written by modern Hindu authors, such as the Arya, Parasara, and other treatises known by that designation, as well as the tikas of Bhaskara Charya, Varaha Mihira, and others, may be considered as commentaries on the four principal Siddhantas of the Hindu religion.

TIKAL, a Chinese weight, also money of account. As a weight, about 4¼ oz., or the 16th of the catty; as a money, reckoned at the third of a pound sterling. It is also called a lyang; another name in Burma for the kyat, a weight which consists of 252 grains. In Siam the tikal coin and weight is 236 troy grains, and its value in England is about 2s. 6d. sterling. Major Phayre believes the Burma name to be derived from Ta-kyat, one kyat. The tikal or kyat in Burmese weights is equal to 14 tolas, or 100 tikals are equal to 1400 tolas.—*Simmonds' Dict.*

TILA. HIND. Strips of the bark or sheaths of the moonj grass used by Dosalis. Tili of Muzaffargarh, the pith of the culm of sirki, Saccharum moonja.

TILA. BENG. A word commonly applied in Eastern Bengal to low and often isolated hills starting up from the plain. At the town of Sylhet there are several such, on which the houses of the European officials are built.—*Yule, Cathay,* ii. p. 516.

TILA. HIND. Gold, gold wire, gold thread. Tila-bat, the twister or maker of gold embroidery thread (gold on silk), or Kalabatun. Tila-kar, gold work of embroidery fabrics.

TILA, a gold coin of Bokhara, value 12s. 6d. Padshahi Tilasi, the gold tila of Bokhara. The Central Asia coin has three different values. There are the tila of Bokhara, of Khokand, and of Khiva. The last-named State, indeed, has one or two kinds. It is made of gold, the purity of which varies greatly, and in consequence its value fluctuates to a greater extent than even the changes of the money market would warrant. Of the three, the Bokharan tila is the most valuable, averaging from 11s. to 13s.; the Kliokandian coming next, at about 8s. 9d.; and the Khivan last, at about 8s. 4d. The smaller Khivan tila is half the value of the larger. The result of an analysis by the Mining Department at St. Petersburg of the Bokharan tila showed that it contained rather more than 4½ grammes of pure gold, while the Khokandian had less than 3½ grammes of the metal. This analysis made it clear that the coin of Bokhara was fully entitled to the first place among the moneys of Turkestan. The tila has always been the legal tender in that part of the world.

TILAK. HIND. A kind of tunic worn by Meo women.

TILAKA or Viseshaka. SANSK. A mark with some coloured substance in the middle of the forehead. The sectarian mark on the forehead of a Hindu, but most of the non-Aryan races also use it.—*Hind. Th.* See Tika.

TILAK CHANDRA, a tribe of Bais Rajputs at Dundhia khera.

TILES.

Tuiles, ... FR.	Ubin, Jobin, . . MALAY.
Dachziegel, . . . GER.	Tscherepiza, . . . RUS.
Kaprail, . GUJ., HIND.	Tejas, ... SP.
Tegole, Embrici, . . IT.	Odugal, ... TAM.
Ganteng, Gandeng, MALAY.	Penkalu, ... TEL.

Tiles are made of clay, and baked in an oven or in the open air to harden them. They are of various shapes and sizes, and are used chiefly for covering roofs, and occasionally also for paving floors and making drains.—*Faulkner.*

TILE-TEA, a kind of flat brick tea, of much solidity, made in China, and taken to Kiachta, where it is sold to the Armenians and Tartars, who distribute it through the Caucasian provinces and Eastern Siberia. The Kalmuk, Kirghiz, and Buratria nations consume the greater part of it. It is prepared in a different manner from common tea, being stewed with milk, butter, salt, and herbs, constituting rather an article of food than a dietetic beverage.—*Simmonds' Dict.*

TILIACEÆ. *Juss.* The Linden tribe of useful plants, consisting, in India, of the genera Corchorus, Triumfetta, Grewia, Berrya, and Brownlowia. The general properties are mucilaginous and emollient. Corchorus olitorius, the pat of Bengal, and C. capsularis, the ghi-nalita-pat, are cultivated for the fibre of their bark, which is employed to form cordage for agricultural purposes and boats, also to form gunny, a coarse cloth, and likewise to form paper. Triumfetta angulata is the bun okra of Bengal; several species of Grewia yield useful products, and Berrya ammonilla yields the valuable Trincomalee wood of commerce.—*Voigt.*

TILING, the race speaking the Telugu language. Tiling and Canarese people are almost of similar physical frame—have tall, graceful figures, but, as a rule, the Tiling are fairer than the Canarese. The great similarity of the two languages, Canarese and Telugu, supports the impression that they are of the same stock, who have separated in more recent times, and that circumstances have modified their characters and personal appearance. The inland tract of table-land country occupied by the Canarese, from the southern part of the Mysore country through Bellary in the Ceded Districts, up to Bijapur and Beder, is arid, and the soil yields as food crops, small millet grains, Eleusine coracana, Setaria Italica and Germanica, Panicum, and Penicillaria spicata, which even the humbler labourers of the south of India only use on pressure, when scarcity or dearth prevails; and a hot, arid climate, with a less nourishing food may have led to their darker complexions.

The Tiling people dwell from the shores of the Coromandel coast westwards to Beder, and three languages, Telugu, Mahrati, and Canarese, there commingle. In 1881, the number speaking Canarese was 8,336,008, and those speaking Telugu, 17,000,358.

TILSIM, pl. Tilasim. ARAB. A talisman or magical image, upon which, under a certain horoscope, are engraved mystical characters, on seals, images, etc., as charms against enchantment or fascination. They are often buried with treasure, to ward off discovery; or by being rubbed, command the presence and services of the Jin.

TIMAH. MALAY. Tin. Also Timah-putih and Timah-sari, called also Talagh. The Malay and Javanese term for tin, timah, is a word used in the Archipelago as a generic term for both tin and lead; the epithet white or flowery, putih and sari, being given to tin itself, and that of black, itam, to lead, a metal with which, being entirely a foreign product, the Malayan nations are but little acquainted.

TIMALIA, a genus of birds of the sub-family Timalinæ. T. pileata, *Horsf.*, the red-capped wren babbler, occurs from Northern India to the Eastern Archipelago; T. nigricollis, *T.*, T. erythroptera, *Bl.*, T. maculata, *T.*, and others, occur in the Malay Peninsula and E. Archipelago. T. pileata is not unfrequent in the groves and small woods which abound throughout Java. It often approaches villages and plantations, constructing its nest in the hedges. It is one of the social birds that delight to dwell in the vicinity of cultivation. Its flight is low and interrupted; and wherever it resides it is a welcome neighbour, in consequence of its peculiar pleasant note, which consists of a slow repetition of the five tones of the diatonic scale (C, D, E, F, G), which it chants with perfect regularity, several times in succession, and at small intervals of time. Dr. Horsfield remarked that the sixth tone was sometimes added; but as this required apparently an extraordinary effort, it was by no means so agreeable to a musical ear as the simple repetition of the five notes, which appear to be the natural compass of the bird's organs.—*Jerdon; Eng. Cyc.; Horsfield's Java.*

TIMBER and Fancy Woods.

Khashab, . . . ARAB.	Aruneya, . . . MAHR.
Arunyavu, . . . CAN.	Arunuyum, MALEAL., SAN.
Nath'h, . . . DUKH.	Hez'm, Chob, . . PERS.
Timmerhout, . . DUT.	Cembrowina, . . POL.
Bois de charpente, . . FR.	Stroewoi gess, . . RUS.
Bois à batir, ... ,,	Davou, ... SANSK.
Bauholz, Zimmer, . GER.	Madera de construccion, SP.
Lakaru, ... GUJ.	Kadu kambu, . . TAM.
Lakra, . HIND., MAHR.	Karra, Koia, . . . TEL.
Legname da fabbricare, IT.	

In contradistinction to dye-woods, woods for engraving, ornamental woods, etc., wood felled and seasoned, and fit for building purposes, is called timber, from Saxon, Timbrian, to build. Wood is a term commonly applied to those portions of the vegetable axis that are sufficiently hard to offer considerable resistance and solidity, so as to be used for purposes requiring various degrees of firmness and strength. Every flowering plant is composed of an axis and appendages of the axis; the former consisting of the stem and root, the latter of the leaves and flowers. In trees, shrubs, and undershrubs, the axis is said to be woody; in herbs it is termed herbaceous. In the former, stems are permanent, and do not die to the ground annually, as is the habit of the latter. A shrub, a tree, an undershrub, a bush are merely gradations of magnitude in perennial plants; woods valuable for purposes of art and manufactures are derived from all of them. But bulk and dimensions are necessary to make timber available for extensive use.

The trunk of a tree, with or without boughs or branches undressed, is termed round timber; when hewn into logs, square timber; when quartered, billets; when split, staves and lathwood; when sawn, deals, battens, planks, boards, and scantling. The stems or trunks of several kinds of young trees are called spars, poles, and rickers, also prop-wood and post-wood.

In the south of India, the stem of the palmyra palm, cut longitudinally in four, is called reeper, and nat'h is applied to squared timber.

Sap-wood is that part of the wood next the bark, and heart-wood, near the centre of the bole or stem. Sap-wood is softer and generally lighter-coloured than heart-wood; it decays more rapidly, and is more subject to attacks of insects. The proportion of sap-wood varies much in different trees. In many trees, such as those that produce the ebonies of commerce, the line of demarcation between the heart-wood and sap-wood is so strongly defined as to permit the application of those two parts of the timber to different economic purposes, and the sap-woods and heart-woods in such cases, though the products of the same tree, receive in commerce distinct names. In other trees the change from the sap-wood to the heart-wood is gradual; but in all cases the sap-wood preponderates in young trees, and the heart-wood in the old. Also, in trees that have not arrived at maturity, the hardness and solidity of the wood are greatest at the heart, and decrease towards the sap-wood. But in the mature tree the heart-wood is nearly uniform, while that of a tree on the decline is softer at the centre than it is next the sap-wood.

As with the animal world, so with the vegetable creation, trees have the three stages of infancy, maturity, and old age; and Tredgold (p. 196) tells us that the oak and chesnut trees, under favourable circumstances, sometimes attain an age of about 1000 years; beech, ash, and sycamore, of half that age. The plane tree, the Chinar of N.W. India, is said to live to a great age. If felled too young, there is much sap-wood, and even the heart-wood has not acquired a proper degree of hardness, and such timber cannot be durable. On the other hand, if the tree be not felled till on the decline, the wood is brittle and devoid of elasticity, is tainted and discoloured, and soon decays. The rule therefore is to fell the mature tree when the quantity of sap-wood is small, and the heart-wood nearly uniform, hard, compact, and durable; but too early is worse than too late. Therefore, for S.E. Asia, a tabular statement showing the ages at which its various timber trees reach maturity is very necessary, though still a desideratum. Dr. Brandis tells us that in British Burma, a full-grown teak tree of 9 feet in girth cannot be supposed to be less than 160 years old. And a writer has mentioned that teak should not be cut for timber under 80 years of age. In England, Tredgold tells us (p. 198) oak is never cut for timber under 50 nor above 200 years of age.

The vast extent of the regions of the East Indies,

their various climates and physical conditions, render it impossible that the same tree can produce the identical quality of timber in every locality where it grows. As an instance of this may be cited the majestic teak, which grows to an immense height in Malabar, on the Godavery, in Pegu and Tenasserim, and may be seen in the mountains of Bundelkhand, but is there only in the form of a moderate-sized shrub; and even where it presents the same form of a gigantic tree, as in Malabar and Pegu, the quality of the timber it yields is dissimilar. The timber of trees which grow in moist and shady places is not so close, substantial, or durable as that which comes from a more exposed situation.

The *preservation* of timber naturally arranges itself into the preservation of growing timber, and that of timber when felled. The preservation of growing timber is an art of considerable importance, and is cultivated in countries where timber is comparatively scarce.

The practice of thinning out plantations is of value, not only as affording a supply of wood, but, by admitting an increased supply of air and light to the remaining trees, their growth is greatly promoted.

Since the close of the 18th century, it has been an increasing belief that the climate of a country is greatly modified by the scarcity or abundance of its trees and forests. Forty years ago, in 1845, Assistant-Surgeon Balfour furnished the Madras Government with a memorandum of all existing information on this subject; it then became a matter of inquiry by a committee of the British Association; and it is now generally recognised that trees exercise a powerful influence on the climate of the region or district in which they grow. In a tropical country like India, therefore, the preservation of existing trees, and their extension in arid districts, is a matter of much importance. Dr. Cleghorn, in a report for 1860, suggested that the high wooded mountain tops overhanging the low country (such as Hoolicul) should be preserved with rigid care, and the forest there not be given over to the axe, lest the supplies of water be diminished. In order that the course of the rivulets should be overshadowed with trees, the hills should be left clothed to the extent of about half of their height from the top, leaving half of the slope and all the valley below for cultivation.

Teak is a ship-building wood; teak, sal, padouk, etc., are recognised ordnance woods; Trincomalee, Chittagong, and Coromandel rosewood, redwood, satin-wood, saudal-wood, snake-wood, mahogany, ebony, kyaboca, zebra, and tulip are furniture or fancy woods.

By far the greater part of the ornamental woods are derived from trees. There are, however, some remarkable exceptions. The wood of roots is different in structure from the wood of stems, and the same tree may furnish two very different kinds of ornamental wood, according as they are derived from its ascending or its descending axis. The wood of the inner portions of a stem may be of very different colour and quality from that of its outer parts. In the immediate neighbourhood of the origin of branches, it may exhibit varieties of pattern, such as to render it greatly more ornamental than elsewhere, and in some cases, when under the influence of morbid growth, reveals additional beauties, so as to be prized for qualities which in nature are defects. If a cross-cutting of teak, or oak, or mango be compared with a like portion of palmyra wood, the differences between them will be seen strongly contrasted. In the former, the layers of wood are ranged in concentric circles round the central pith, and are encased externally in a binding of bark, itself composed of distinct and differently organized portions. In the latter there is a uniform appearance throughout the section, the substance not being disposed in concentric rings, but appearing as if a bed or ground of one kind was studded with specks of another order of tissue. These dissimilarities indicate differences of the greatest structural importance in the economy of the respective trees. Corresponding with them are peculiar modifications of every portion of the plant's organization. Also the external aspect of the plants of either type is altogether unlike that of the other. The appearance styled silver-grain in wood is dependent on the cellular tissue of the medullary rays, and is therefore exhibited by exogenous woods only. It gives the streaks the glancing satiny lustre so ornamental in many kinds of woods. In the oak and beech this appearance is conspicuous. The inner layers of wood, after the tree has become aged, often become compact, and frequently different in colour from the new wood. They are then styled the heart-wood. Botanists term them the duramen, and apply the name alburnum to the outer layers or sap-wood. In the former the tissues have become dry and dense, and charged with solidifying deposits, so as to prevent them aiding in the ascent of the sap. Often, too, they become more or less deeply coloured, so as conspicuously to contrast with pale sap-wood. This difference is especially conspicuous in the ebony tree, the black portion of which is the duramen or heart-wood. In the oak they resemble ebony.

The main economic value of timber, apart from considerations of strength, durability, texture, and colour, will depend on the quantity in which it can be produced for the many purposes for which timber is indispensable; and in countries destitute of coal, the supply of fuel for manufactories, railways, and steam flotillas, as well as its domestic consumption, is an important item in the consideration of timber resources. The most important application of wood is in the building and repairing of houses and ships, and in the construction of machinery. For these purposes the larger trees which come under the denomination of timber are employed. In the moist climates of Southern and Eastern Asia, trees grow to a majestic height, but others are so destitute of verdure that even the castor-oil plant is valued for construction.

For all practical purposes, those woods appear to be best in which the cells are lined with resinous matter; those filled with hygroscopic gummy matter are for the most part of less value; they are seasoned with difficulty, and are always more liable to decay. The best woods are those having a strong fibre, protected from all external influences by a coat of resinous matter, or at least of a matter insoluble in water, and one which does not attract atmospheric moisture.

Some trees, while growing, secrete large quantities of silica, which is deposited in hollows or in the interstices of the woods. The tabashir of the hollow bamboos is a well-known example; the tamarind tree has so many portions of silica in its

stem, that the carpenters of the E. Indies object to work it; and masses of silica, of considerable size, have been got from the teak logs.

Teak.—In the years 1880-81 to 1882-83, the value of the teak exported from India ranged from 50 to 61 lakhs. That of other timber, with ebony and sandal-wood and other kinds, was 4½ lakhs, sandal-wood in 1883 being Rs. 4,02,931.

In the years 1880 to 1882, the timbers and woods of kinds imported into Great Britain under the designations hewn, sawn, split, planed, dressed, staves, and mahogany, ranged in value from ten to twenty millions sterling; those from British North America, Germany, Norway, Russia, Sweden, and other countries, ranged in value from £14,956,547 to £17,168,300.

Teak when young grows very rapidly. Trees ten years old have usually a girth of eighteen inches, measured at six feet from the ground; at twenty-two years, a girth of three feet is attained; but full-grown trees of nine feet in girth cannot be supposed to be less than 160 years old.

The strength and density of teak timber vary exceedingly, according to the locality where the tree is grown. The extremes observed in preliminary experiments were 40 and 50 lbs. per cubic foot, and 190 to 289 lbs. breaking weight. Malabar teak is by common consent ranked higher for naval purposes than Tenasserim or Pegu timber. The cause of its greater durability and power of resisting dry-rot, appears to depend chiefly on its more oily or resinous quality, and the greater density arising from its slow growth on the sides of hills. In Burma, the best teak-growing districts are Pegu on the Irawadi and Sitang rivers and in the Thoungyen valley, comprising 7312 square miles of forest. Tenasserim and Martaban include 520 square miles of jungle on the Salwin river banks. But even these forests are poor compared with the extensive tracts covered with teak to the north of the British boundary, especially on the feeders of the Sitang and Salwin rivers, and some of the tributaries of the Meinam or Bankok river. The trees also are, as a rule, much larger, and the shape of the stem more regular, in the forests of the Burmese empire, the Siamese kingdom, and the Karennee country. The tallest teak tree measured in Pegu was 106 feet high to the first branch.

Sal.—In Central India, on the Nerbadda river, extensive sal or saul forests begin to take the place of teak, which does not occur farther north than Jhansi. Along the whole Sub-Himalayan range up to 3000 feet elevation, and in a belt range from five to twenty miles wide at the foot of the hills, and over 1500 miles long, dense forest is found. Wherever the soil is elevated and dry, this is pure sal forest. In Kamaon, Oudh, and many other of the Nepal jungles, as many as seventy first-class trees per acre have been found, besides young trees from seed, at 200 or 300 per acre, growing up with the old. The ferry-boats used on the Gogra and other affluents of the Ganges are formed of single logs hollowed out and floated down from Nepal, one of which holds ten to fifteen men, with cattle and horses, costing £5 to £10, purchased from the Nepal boat-makers. Sal timber (Shorea robusta) is close-grained and heavy, but does not appear to be very durable, and on that account is inferior to teak; but in strength it surpasses the latter, and deserves to be considered the second best timber tree in India. The British sal forests may roughly be computed as follows:—Central Province, 2000 square miles; Kamaon and Garhwal, 600; Dehra Doon and Binjore, 400; Oudh, 250; Gorakhpur, 300. Both sal and teak trees take 100 years to grow.

Pine.—There are some excellent coniferous woods in the British hill provinces of Kamaon and Garhwal and the Panjab Himalayas. The Cedrus deodara is there of immense age and size, 40 feet girth and 250 feet high; its timber is nearly imperishable. Pinus longifolia occurs over all the lower Himalaya hills, covering an area of several thousand square miles. Its timber is equal to Norway pine. The Lagerstræmia reginæ is abundant throughout British Burma, and is used more extensively than any other, except teak, for the fittings of boats, sometimes for the hulls of canoes, in Rangoon for the knees of ships, and also now for ordnance purposes.

The padouk of the Tenasserim Provinces, Pterocarpus Indicus, is a beautiful, hard, compact timber.

The Straits Settlements are very rich in wood.

The Malay Peninsula also possesses many useful woods, and some four or five command a market, at very high prices, for Madras. They are strong, solid, and very durable, being principally used for girders, rafters, joists, and timber for bridges, standing the sudden changes of the climate remarkably well. One, the marrabow, is also used for furniture; it is not subject to dry-rot, and, when well seasoned, is known to last nearly half a century. A wood called boonoot, which is tough, hard, crooked-grained, and fibrous, is in general use for masts and spars of vessels.

Ceylon, although well timbered and rich in some ornamental and fancy woods, exports but little timber.

For the *preservation* of timber in moist places, remove and replace the sap, or so modify it as to retard or prevent decay. With these aims, the spontaneous ascent of the sap is encouraged by retaining the felled timber in an upright position; soaking the felled wood in water so as to dilute or remove the sap; and in the pneumatic processes, which are the most effective, the following have been used for impregnation:—Creosote of commerce (raw), carbolic acid, acetate of iron (raw), sulphate of copper, chloride of zinc, sulphate of zinc, perchloride of mercury or (kyan) corrosive sublimate, chloride of sodium (salt), sulphate of soda, saltpetre, borax, sulphate of iron, arsenic.

Various methods have been adopted to render wood less combustible, by saturating it with solutions of phosphate of soda, and muriate or sulphate of alumina, and chloride of calcium. A proposed plan is to impregnate wood with silicate of soda, and to coat its surface with a silicate. The impregnating of the wood is effected by putting it into a solution of the silicate. The surface of the wood is then washed over with a somewhat diluted solution of the silicate of soda. After an interval of at least two hours, a coating of thick lime-wash is applied over the silicate; and finally, on the following day, a strong solution of the silicate is applied over all. In this way a protective covering is given to the wood. The process may be used with benefit in the case of timber employed for wooden huts.

The following is a list of the relative strengths of a few of the Australian woods, and some of

the Indian woods; also their weights per cubic foot:—

	Lbs.	Strength.
Australian Woods—		
Tarra,	59	20,238
Tasmanian grey iron-bark,	64	24,400
Australian grey iron-bark,	64	22,500
Blue gum,	48·19	20,060
Stringy bark,	45·16	13,000
Indian Woods—		
Sal,	64	18,500 average.
Teak, Indian,	55	15,500 average.
Teak, Moulmein,	42	11,520
Teak, Cochin-China,	44	12,100
Teak, Johore,	62	19,400
Deodar,	29·34	...
Chir,	26·67	...

A vessel built of the Australian woods, iron-bark, box, banksia, and tea-tree timber, and planked and lined with flood gum, blue gum, or black bust, and trenailed with iron bark, takes a high place at Lloyds'.

The preservation of the forests of India, and the search for timbers and fancy woods suitable for the purposes of the State and wants of the people, have long been objects of attentive interest to the Governments of India. Amongst the earliest of the scientific investigators we find recorded the names of Drs. Roxburgh, Ainslie, Wallich, Royle, Gibson, Falconer, M'Clelland, Graham, Wight, and Mason; while Mr. Edye, Colonel Frith, Captain Dance, Mr. Mendis, Colonel Benson, and Mr. Rohde applied a large practical knowledge of the qualities of timber to ascertain the woods suitable for the manufacturing industries of India. There have appeared on this subject—three editions of Balfour's Timber Trees, Timber, and Fancy Woods; Beddome's Flora Sylvatica; Skinner's Indian Timbers; Brandis' Forest Flora; and Gamble's Manual of Indian Timbers.

The timber trees belong principally to the following natural orders of plants, viz.:—

Alangiceæ.	Dipterocarpeæ.	Rhizophoreæ.
Anonaceæ.	Ericaceæ.	Rosaceæ.
Apocynaceæ.	Euphorbiaceæ.	Rubiaceæ.
Arecæ.	Flacourtianeæ.	Salicarieæ.
Aurantiaceæ.	Guttiferæ.	Sapindaceæ.
Bignoniaceæ.	Lauraceæ.	Sapotaceæ.
Bombaceæ.	Leguminosæ.	Sterculiaceæ.
Borasseæ.	Lepidocaryeæ.	Styracaceæ.
Byttneriaceæ.	Loganiaceæ.	Tamariscineæ.
Cedrelaceæ.	Magnoliaceæ.	Taxaceæ.
Cocoaceæ.	Malvaceæ.	Terebinthaceæ.
Combretaceæ.	Memecyleæ.	Tiliaceæ.
Coniferæ.	Moreæ.	Ulmaceæ.
Cordiaceæ.	Myrsineaceæ.	Verbenaceæ.
Cupuliferæ.	Myrtaceæ.	Zanthoxylaceæ.
Dilleniaceæ.	Olacineæ.	

There is no regular rule for determining botanical orders and genera by means of the wood, for in some cases the structure of the genera or species presents characters of very dissimilar type. But the woods of the Coniferæ are always recognisable by the absence of pores; those of the Cupuliferæ by the arrangement of the pores in wavy radial lines and a particular texture. The arrangement of the pores in short wavy lines is a character of the woods of the Sapotaceæ. Somewhat broad medullary rays often indicate the woods of the Dilleniaceæ, Rhizophoreæ, and Myrsineaceæ; a close and even grained wood, most species of the order Rubiaceæ; while the woods of species of Ficus are recognised by alternate layers of soft and firm tissue.

The pores of different woods vary, and Mr. Gamble gives the following examples:—Extremely small, Buxus sempervirens; very small, Acer pictum; small, Adina cordifolia; moderate, Bassia latifolia; large, Albizzia lebek; very large, Erythrina suberosa.

Mr. Gamble illustrates his terms for degrees of hardness by applying them to the timbers of certain trees:—Extremely soft, Cochlospermum gossypium; very soft, Sterculia villosa, Bombax Malabaricum; soft, Cedrela toona, Albizzia stipulata; moderately hard, Ficus Bengalensis, Tectona grandis; hard, Shorea robusta, Terminalia tomentosa; very hard, Dalbergia sissoo, Quercus semecarpifolia; extremely hard, Pterocarpus Santalinus, Hardwickia binata.

In all countries, most of the woods in general use have a variety of names; the local name varies often in the same district. Many have likewise a commercial name, by which they are known in the market, as Trincomalee wood, Coromandel wood, Chittagong wood, etc. There are cedars from several trees; every country has its own iron-wood, rosewood, black-wood, and ebony. The timber trees and fancy wood of Southern and Eastern Asia are about 1000 in number, but those in common use are not above 100. The following list contains the names of the principal trees which are felled for timber or fancy woods and useful purposes throughout the various countries in the East Indies:—

Abies dumosa, *Lindon.*
A. Smithiana.
A. Webbiana, *Lindl.*
Acacia Arabica.
A. catechu.
A. dealbata, *Link.*
A. Farnesiana.
A. ferruginea.
A. intsia.
A. leucophlœa.
A. melanoxylon, *R. Br.*
A. modesta, *Wall.*
A. pennata.
Acer cæsium, *Wall.*
A. Campbellii, *H. f.*
A. caudatum, *Wall.*
A. cultratum.
A. Hookeri.
A. lævigatum, *Wall.*
A. oblongum, *Wall.*
A. pictum, *Thunb.*
A. Sikkimense.
A. Thomsoni.
A. villosum, *Wall.*
Acrocarpus fraxinifolius, *Arn.*
Actephila Neilgherriensis.
Adansonia digitata.
Adenanthera pavonina.
Adhatoda vasica.
Adina cordifolia, *H. f. et Bth.*
A. sessilifolia.
Ægiceras corniculata.
Ægle marmelos.
Æsculus Indica, *Coleb.*
Æ. punduana.
Afzalia bijuga, *A. Gray.*
Agathis loranthifolia.
Agati grandiflora.
Aglaia spectabilis.
Ailanthus excelsa.
A. Malabarica.
Alangium decapetalum.
Albizzia amara, *Boivin.*
A. Julibrissin, *Boivin.*
A. lebbek, *Bth.*
A. lucida, *Bth.*
A. odoratissima, *Bth.*
Albizzia procera.
A. stipulata, *Boivin.*
Alnus Nepalensis, *D. Don.*
A. nitida, *Endlicher.*
Alseodaphne grandis.
A. semecarpifolia.
Alstonia scholaris.
Altingia excelsa.
Amoora cucullata, *Roxb.*
A. rohituca.
A. spectabilis.
Anacardium occidentale.
Andrachne cordifolia.
Anisophyllea Zeylanica.
Anogeissus acuminata.
A. latifolia.
A. pendula.
Anthocephalus cadamba, *Bth.*
Antiaris toxicaria, *Lesch.*
Antidesma diandrum.
A. ghæsembilla.
A. menasu.
Aquilaria agallocha.
A. Malaccense.
Araucaria, *sp.*
Areca catechu.
Artocarpus calophylla.
A. chaplasha, *Roxb.*
A. echinata.
A. hirsuta.
A. integrifolia.
A. lacoocha, *Roxb.*
A. nobilis.
A. pubescens.
Atalantia monophylla.
A. missionis.
Averrhoa carambola.
A. bilimbi.
Avicennia tomentosa, *Jacq*
Baccaurea sapida, *Mull.*
Bambusa, Bamboo.
Barringtonia acutangula.
B. speciosa, *Forst.*
Bassia butyracea, *Roxb.*
B. latifolia, *Roxb.*
B. longifolia, *Willd.*
Bauhinia acuminata, *L.*
B. brachycarpa.

Bauhinia diphylla.
B. Malabarica, *Roxb.*
B. purpurea, *Linn.*
B. retusa, *Roxb.*
B. tomentosa.
B. variegata, *Linn.*
Berrya ammonilla.
Betula acuminata, *Wall.*
B. bhojputra, *Wall.*
B. cylindrostachys, *Wall.*
Bischoffia Javanica, *Bl.*
Blackwellia perpinqua.
B. spirale.
B. tomentosa, *Vent.*
Boehmeria rugulosa, *Wedd.*
Bombax heptaphyllum.
Borassus flabelliformis.
Boswellia thurifera, *Roxb.*
Briedelia montana, *Willd.*
B. tomentosa, *Bl.*
Bruguiera gymnorhiza, *Lam.*
Buchanania angustifolia, *Roxb.*
B. latifolia, *Roxb.*
Bucklandia populnea, *R. Br.*
Bursera serrata, *Coleb.*
Butea frondosa.
Buxus sempervirens, Box.
Cæsalpinia sappan, *Linn.*
Calamus, Canes, Rattans.
Callicarpe arborea, *Roxb.*
Calligonum polygonoides, *Linn.*
Calophyllum amœnum, *Wall.*
C. elatum, *Bedd.*
C. polyanthum, *Wall.*
C. spectabile, *Willd.*
C. tomentosum, *Wight.*
C. Wightianum, *Wall.*
Canarium Bengalense, *Roxb.*
C. coccinco-bracteatum, *Kurz.*
C. euphyllum, *Kurz.*
C. strictum, *Roxb.*
Capparis aphylla, *Roth.*
C. grandis, *Linn.*
Carallia integerrima, *D. C.*
C. lucida.
C. Zeylanica.
Carapa Moluccensis, *Lam.*
C. obovata, *Bl.*
Careya arborea.
Carpinus viminea, *Wall.*
Caryota sobolifera, *Wall.*
C. urens, *Linn.*
Casearia esculenta, *Roxb.*
C. glomerata, *Roxb.*
Cassia auriculata, *Linn.*
C. fistula, *Linn.*
C. Florida, *Vahl.*
C. nodosa, *Ham.*
C. Roxburghii, *D. C.*
Castanea Indica, *Roxb.*
C. Martabanica of Tavoy.
Casuarina equisetifolia, *Forst.*
Cedrela serrata, *Royle.*
C. toona.
Cedrus deodara.
Celtis Australis, *Linn.*
C. Caucasica, *Willde.*
C. tetrandra, *Roxb.*
C. Wightii, *Planch.*
Cerbera odollam, *Gærtn.*
Chavannesia esculenta, *D. C.*
Chickrassia tabularis.
Chloroxylon Swietenia, *D. C.*
Cicca disticha.
Cinchona, *sp.*
Cinnamomum glanduliferum, *Masn.*
C. obtusifolium, *Nees.*
C. tamala, *Nees.*
Clerodendron inerme, *Gærtn.*
Cocos nucifera, *Linn.*
Connarus speciosa.
Conocarpus latifolia, *Roxb.*
Cordia angustifolia.
C. fragrantissima, *Kurz.*
C. M'Leodii, *H. f. et T.*
C. myxa, *Linn.*
C. vestita, *H. f. et T.*
Coriaria Nepalensis, *Wall.*
Cornus capitata, *Wall.*
C. macrophylla, *Wall.*
C. oblonga, *Wall.*
Corylus colurna, *Linn.*
C. ferox, *Wall.*
Cotoneaster bacillaris, *Wall.*
Crataeva Roxburghii.
Cratoxylon neriifolium, *Kurz.*
Croton argyratus, *Bl.*
Cupressus funebris, *Endl.*
C. torulosa, *Don.*
Cylicodaphne Wightiana, *Nees.*
Cynometra bijuga, *Spanog.*
C. polyandra of Nepal.
C. ramiflora?
Dacrydium elatum, *Wall.*
Dalbergia cultrata, *Grah.*
D. frondosa, *Linn.*
D. lanceolaria, *Linn.*
D. latifolia, *Roxb.*
D. paniculata, *Roxb.*
D. sissoo, *Roxb.*
D. Ujjainensis.
Daphnephyllopsis capitata, *Kurz.*
Daphnidium elongatum, *Nees.*
D. pulcherrimum, *Nees.*
Dendrocalamus, *sp.*
Dillenia augusta.
D. Indica, *Linn.*
D. pentagyna.
D. scabrella, *Roxb.*
Diospyros chloroxylon.
D. ebenum, *Koenig.*
D. exsculpta, *Beddome.*
D. hirsuta.
D. Kurzii, *Hiern.*
D. melanoxylon.
D. sylvatica, *Roxb.*
D. undulata, *Wall.*
Dipterocarpus alatus.
D. grandiflora.
D. Indicus, *Beddome?*
D. lævis, *Ham.*
D. tuberculatus, *Roxb.*
D. turbinatus, *Gærtner.*
Dodonea viscosa.
Dombeya melanoxylon.
Doona Zeylanica, *Thw.*
Drimycarpus racemosus, *H. f.*
Duabanga Sonneratioides, *Buch.*
Dysoxylum procerum, *Hiern.*
Echinocarpus dasycarpus, *Bth.*
Ehretia aspera, *Roxb.*
E. lævis, *Roxb.*
Elæocarpus lanceæfolius, *Roxb.*
E. serratus, *Linn.*, Ceylon.
Elæodendron Roxburghii, *W. and A.*
Embryopteris glutinifera, *R.*
Engilhardtia Colebrookiana, *Lindl.*
E. spicata, *Bl.*
Eriobotrya Japonica, *Lind.*
Eriolæna Candollei, *Wall.*
E. Hookeriana.
Erythrina Indica, *Lam.*
E. suberosa, *Roxb.*
Eucalyptus globulus, *Lab.*
Eugenia Arnottiana.
E. caryophyllifolium.
E. grandis, *Wight.*
E. jambolana.
E. Kurzii, *Duthie.*
E. Malaccensis.
E. myrtifolia.
E. obovata, *Wall.*
E. præcox, *Roxb.*
E. salicifolia, *Wight.*
E. spiculata, *Roxb.*
Euonymus Hamiltonianus, *Wall.*
E. pendulus, *Wall.*
Euphorbia tirucalli.
Eurya acuminata, *D. C.*
Excœcaria agallocha, *Willd*
Fagræa fragrans.
Feronia elephantum.
Ficus Bengalensis, *Linn.*
F. cordifolia, *Roxb.*
F. glomerata, *Roxb.*
F. hispida, *L.*
F. infectoria, *Willde.*
F. regia, *Miq.*
F. religiosa, *Linn.*
F. virgata, *Roxb.*
Flacourtia montana.
Fraxinus floribunda, *Wall.*
Garcinia cowa, *Roxb.*
G. elliptica, *Wall.*
G. purpurea, *Roxb.*
G. speciosa, *Wall.*
Gardenia gummifera, *L.*
G. latifolia, *Ailon.*
G. lucida, *R.*
G. obtusifolia, *Roxb.*
G. turgida, *Roxb.*
Garuga pinnata, *Roxb.*
Givotia Rottleriformis, *Griff.*
Glochidon ellipticum.
Gluta Travancorica, *Bedd.*
Gmelina arborea.
Gordonia excelsa, *Bl.*
G. obtusa, *Wall.*
Grewia lævigata, *Vahl.*
G. microcos, *Linn.*
G. multiflora, *Juss.*
G. oppositifolia, *Roxb.*
G. tiliæfolia.
G. vestita, *Wall.*
Guatteria longifolia, *Wall.*
Guettarda speciosa, *Linn.*
Gynocardia odorata, *R. Br.*
Gyrocarpus Jacquini, *Roxb.*
Haciloneuron Indicum, *Bedd.*
Hæmatoxylon campechianum, *Linn.*
Hardwickia binata.
Heritiera fomes.
H. littoralis.
H. minor, *Roxb.*
Heterophragma Roxburghii, *D. C.*
Hibiscus macrophyllus, *Roxb.*
H. tiliaceus, *Linn.*
Hippophaë rhamnoides, *L.*
Hiptage madablota.
Holarrhena antidysenterica, *Wall.*
Holigarna longifolia.
Hopea floribunda.
H. odorata.
Hopea parviflora, *Bedd.*
H. Wightiana, *Bedd.*
Hydnocarpus Alpina.
Hymenodictyon excelsum.
H. thirsiflorum, *Bedd.*
Ilex dipyrena, *Wall.*
I. theæfolia, *Wall.*
I. Wightiana, *Wall.*
Inga bijemina.
I. xylocarpa.
Isonandra Wightiana.
Ixora parviflora.
Jonesia asoca.
Juglans regia, *Linn.*
Juniperus communis, *Linn*
J. excelsa.
J. recurva, *Ham.*
Kandelia Rheedii, *W. and A.*
Kydia calycina.
Lagerstræmia hypoleuca, *Kurz.*
L. microcarpa.
L. parviflora.
L. reginæ.
L. villosa, *Wall.*
Larix Griffithii, *H. f. et Th.*
Laurus nobilis.
Lebidieropsis orbicularis, *Mull.*
Limonia acidissima.
Litsæa Zeylanica, *Nees.*
Lophopetalum Wightianum, *Wall.*
Maba buxifolia.
Machilus macrantha.
M. odoratissima, *Nees.*
Macropanax undulatum, *Seem.*
Magnolia Campbellii, *H. f. et Th.*
Mangifera caloneura, *Kurz.*
M. Indica.
M. sylvatica, *Roxb.*
Mappia fœtida, *Miers.*
Melanorrhœa usitata.
Melia azadirachta.
M. azedarach, *Linn.*
M. Indica, *Brandis.*
Meliosma Arnottiana.
M. dilleniæfolia, *Wall.*
M. Wallichii, *Planch.*
Mesua ferrea, *Linn.*
Metrosideros vera.
Michelia champaca.
M. excelsa, *Bl.*
M. Nilagerica.
Microtropis ovalifolia.
Millingtonia simplicifolia.
Mimusops elengi, *Linn.*
M. hexandra.
M. littoralis, *Kurz.*
Morinda bracteata.
M. citrifolia.
M. exserta.
Morus alba.
M. Indica, *Linn.*
M. serrata, *Roxb.*
Murraya exotica, *Linn.*
Myrica Nagi, *Thunb.*
Myricaria Germanica, *Desr.*
Myristica amygdalina.
M. Malabarica.
M. sphærocarpa.
Myrsine capitellata.
Nauclea cadamba, *Roxb.*
N. cordifolia, *R.*
N. parviflora.
Nerium tinctorium, *Roxb.*
Nyctanthes arbortristis.
Odina wodier.
Olea cuspidata, *Wall.*
O. dentata, *Wall.*
O. dioica, *Roxb.*
O. Europea.

Olea robusta, *Kurz.*
Ougeinia dalbergioides, *Bly*
Parkia insignis, *Kurz.*
P. leiophylla, *Kurz.*
P. Roxburghii, *G. Don.*
Pavia Indica.
Pentacme Siamensis, *Kurz*
Phœnix sylvestris, *Roxb.*
Photina Lindleyana.
Phyllanthus bicolor, *Mull.*
P. emblica, *Linn.*
Pinus dammara.
P. excelsa.
P. Gerardiana, *Wall.*
P. Khassya, *Royle.*
P. Latteri.
P. longifolia of Nepal.
Pistacia integerrima.
Planchonia valida, *Bl.*
Platanus orientalis, *Linn.*
Podocarpus bracteata, *Bl.*
P. latifolia, *Wall.*
Poinciana elata.
P. regia.
Pongamia atropurpurea.
P. glabra.
Populus balsamifera, *Linn.*
P. ciliata, *Wall.*
P. Euphratica, *Olivier.*
Premna latifolia, *Roxb.*
P. mucronata, *Roxb.*
Prinsepia utilis, *Royle.*
Prosopis spicigera.
Protium caudatum, *W. and A.*
Prunus armeniaca, *Linn.*
P. padus, *Linn.*
P. Persica, *Blyth and H. f.*
P. puddum, *Roxb.*
Psidium pomiferum.
P. pyriferum.
Pterocarpus dalbergioides, *Roxb.*
P. Indicus.
P. marsupium.
P. Santalinus.
P. Wallichii.
Pterospermum acerifolium, *Willde.*
P. suberifolium.
Putranjiva Roxburghii, *Wall.*
Pygeum acuminatum.
Pyrus aria, *Ehrh.*
P. foliolosa, *Wall.*
P. lanata, *Don.*
P. variolosa, *Wall.*
Quercus Amherstiana.
Q. annulata, *Smith.*
Q. dilatata, *Lindley.*
Q. fenestrata, *Roxb.*
Q. ilex, *Linn.*
Q. incana, *Roxb.*
Q. lamellosa, *Smith.*
Q. lanceæfolia.
Q. lappacea, *Roxb.*
Q. pachyphylla, *Kurz.*
Q. semecarpifolia.
Q. spicata, *Smith.*
Randia dumetorum, *Lam.*
R. uliginosa, *D. C.*
Rhizophora conjugata, *Linn.*
R. macronata, *Lam.*
Reptonia buxifolia, *A. D. C.*
Rhododendron arboreum.
R. argenteum, *Hook. f.*
R. barbatum, *Wall.*
R. campanulatum, *Don.*
R. Falconeri, *H. f.*
Rhus cotinus, *Linn.*
R. Panjabensis, *Stewart.*
R. semialata, *Murray.*
Ricinus communis, *Linn.*
Rondeletea tinctoria.
Saccopetalum tomentosum *H. f. et T.*
Salix daphnoides, *Vill.*
S. tetrasperma, *Roxb.*
Salvadora oleoides, *Dcne.*
Sandoricum Indicum.
Santalum album.
Sapindus acuminatus, *Wall*
S. detergens, *Roxb.*
S. emarginatus, *Vahl.*
S. rubiginosus, *Baill.*
Schima Wallichii, *Choesy.*
Schleichera trijuga.
Schrebera Swietenoides.
Semecarpus anacardium, *L.*
Shorea laccifera, *Heyne.*
S. obtusa, *Wall.*
S. robusta.
S. tumbuggaia, *Bedd.*
Solenocarpus Indica.
Sonneratia acida.
S. apetala, *Buch.*
Sophora mollis, *Wall.*
Soymida febrifuga.
Spondias mangifera, *Willde*
Sponia orientalis, *Planch.*
S. politoria, *Planch.*
S. Wightii.
Stephegyne parvifolia, *Hook.*
Sterculia fœtida.
S. guttata.
S. villosa, *Roxb.*
Stereospermum chelonoides, *D. C.*
S. suaveolens.
S. xylocarpum, *Bth.*
Strychnos nux vomica.
S. potatorum.
Stylocoryne Webbera, *Rich*
Swietenia mahagoni.
Tamarindus Indica.
Tamarix articulata, *Vahl.*
T. dioica, *Roxb.*
Taxus baccata, *Linn.*
Tecoma undulata, *G. Don.*
Tectona grandis.
T. Hamiltonii.
T. ternifolia.
Terminalia alata.
T. arjuna.
T. belerica.
T. Berryi.
T. bialata, *Wall.*
T. catappa.
T. chebula.
T. coriacea.
T. glabra.
T. myriopteron, *Kurz.*
T. tomentosa.
T. violata.
Tetranthera grandis, *Wall.*
T. monopetala.
Thamnocalamus Falconeri, *H. f.*
T. spathiflorus, *Munro.*
Thespesia populnea.
Trewia nudiflora.
Turpinia Nepalensis, *Wall.*
Ulmus campestris.
U. integrifolia.
U. Wallichiana, *Planch.*
Vaccinium Leschenaultii, *W.*
Vateria Indica.
V. lanceæfolia.
Viburnum hebanthum, *W.*
Vitex alata.
V. altissima, *Linn.*
V. arborea.
V. leucoxylon, *Linn.*
V. peduncularis, *Linn.*
V. trifolia.
Wendlandia exserta, *D. C.*
Wrightia antidysenterica.
Wrightia coccinea.
W. tinctoria.
W. tomentosa, *Rou.*
Xanthophyllum affine.
Xylia dolabriformis, *Blyth.*
Zalacca Wallichiana.
Zizyphus jujuba.

—*Drs. Wight, Powell, Stewart, Mason, M'Cl., Tomlinson; Cleghorn, Madras Ex. Jur. Rep.*

TIM-CHORNAM. Tam. The red mark, made of flour and turmeric or of safflower, on the foreheads of Hindus.

TIME. In most parts of the East Indies, the natural recurrences of night and day, of the moonless nights and quarters of the moon, and of the hot and cold and rainy seasons of the year, have been used as measures of time by the Hindus, who divide the month into two equal lunar portions, according to the increase and decrease of the moon. The measure of seven days for a week has only in modern times become known to the Hindus. They measured each month by the increasing and decreasing moon alone, and by the quarters. They have now copied the names of the week days from Muhammadans and Europeans. Even yet a Hindu dates his letter thus—On Monday, the 6th of the bright fortnight in Magha. The periods of time with the Hindus regulate their religious rites, and the Chinese worship heaven and earth on the 1st and 15th of each month.—*Ward*, iii. p. 18; *Dr. Edkins.*

TIMKOWSKI, GEORGE, author of Travels of the Russian Mission through Mongolia to China, and Residence in Pekin in 1820–21, with Notes by J. von Klaproth, 1827.

TIMOKO. For the hilts and sheaths of krisses the Malay make use of the 'timoko' wood of Java, of which the black and white variegated fragments are called 'pelet.' There are various kinds.

TIMOR, lat. 8° 21′ to 10° 23′ S., and long. 123° 30′ to 127° 15′ E. It is the largest and most southerly of the Molucca Islands. It is formed of high undulating mountains in the interior, though near the sea it is of moderate elevation. The Portuguese settlement of Dieli or Dicly is in lat. 8° 34′ S., and long. 125° 40′ E., and on the north side of the island.

Timor means the east, and was probably imposed on this island by the Malays, to whose language it belongs, because this was the extreme limit of their ordinary commercial voyages to the S.E. The two languages of Timor are the Manatoto and the Timori; the first spoken at the N.E. end of the island, and the last used by many of the tribes as a common medium of intercourse. No alphabet has ever been invented in Timor.

Timor seems to form the N.E. end of the great range of volcanic islands, which extend N.E. and S.W. from Timor to Sumatra. It has only one active volcano, Timor Peak, near the centre of the island, which was blown up during an eruption in 1638, and has since been quiescent.

There are Malays and Chinese, but the native Timorese preponderate, and have nothing in common with the Malays, but are closely allied to the true Papuans of the Aru Islands and New Guinea. They are of the Papuan type; all have pronounced features, large, somewhat aquiline noses, and frizzly hair. The women talk to each other and to the men with loud voices, and with a self-assertion quite different from Malay women. The mountaineers of Timor are a people of Papuan type, have rather slender forms, bushy frizzled

hair, and the skin of a dusky brown colour. They have the long, somewhat aquiline nose, with the overhanging apex, which is so characteristic of the Papuan, and so absolutely unknown among races of Malayan origin on the coast. There has been an admixture of Malay, perhaps of Hindu as well as of Portuguese, and the coast occupants have wavy and frizzled hair, a lower stature, with less prominent features, and the houses are built from the ground. The houses of the Papuan mountaineers are raised on posts. The dead of the Papuan Timorese are laid on a stage 6 or 8 feet above the ground, sometimes open, sometimes covered, and are retained there till money for a feast can be obtained, when they are burned.

The S.E. coast near Mount Allas is occupied by the Papuan race with frizzled hair in tufts on the head. Mr. Earl says that some of the people on the table-land back of Dieli have opaque yellow complexions, with hair of a reddish or dark auburn colour, and that the hair of others is straight, fine, and of a reddish hue; and that every intermediate variety of hue and complexion between this and the black or deep chocolate colour and the short tufted hair of the mountain Papuan is found in Timor, and it is possible that the races are there mixing, as its position is next to Papua.

The 'Pomali,' exactly resembling the Taboo of the Pacific, is in full operation here, and a few palm leaves stuck outside of a garden will preserve it from any thief. In the Malayan Miscellanies, published under the auspices of Sir Stamford Raffles at Bencoolen in 1820, lists of two languages of Timor and of the languages of the two small islands at its western end, Rotti and Savu, are given, amounting each to 95 words.

From Timor to New Guinea there runs a long chain of islets, forming as it were a wall of barrier to the S.E. portion of the Archipelago. In these islets the inhabitants speak many languages. By far the most ample and authentic account of them has been given by Mr. G. W. Earl, who says that in the S.E. parts of the Indian Archipelago, where opportunities of social intercourse between the various petty tribes are of rare occurrence, every island, every detached group of villages, has its own peculiar dialect, which is often unintelligible even to the tribes in its immediate neighbourhood. In some of the larger islands, Timor for example, these tribes are so numerous, and the country occupied by many of them so extensive, that it becomes impossible to form even an approximate estimate of their number. Of one language, the prevailing one among several languages of the island of Kisa, one of the Sarawati group in the chain of islets already mentioned, Mr. Earl furnished a vocabulary of 330 words. The Kisa is an unwritten tongue, but its vowels are the same as those of the Malay and Javanese.—*Earl*, p. 180; *Bikmore*, p. 127.

TIMOR LAUT, or the Teninber Islands, form a group which consists of the large island of Timor Laut, the islands of Larat and Virdati, and the numerous small low lands fronting its northern side. Timor Laut means Timor of the Sea, or the Eastern Timor. It is about 70 miles long by 25 miles broad, lying between lat. 7° and 8° S., and long. 132° and 133° E. The Teninber group is divided by Strait Egeron into a northern and southern portion. The other larger islands are Seloe and Seirah on the west; Larat, Virdati, and Malae on the N.E. and N.

TIMUNI. The Char Aimak or four tribes are the Timuni, Teimeni, Firoz Kohi, and Jamshidi, all of them of Iranian origin, and all speaking Persian. The Timuni dwell at Gorian and Kuli, are seen on the western boundary of Herat, and in the villages and towns situated east of Iran, from Tarbat Shaikh Jam as far as Khaf. About a thousand of their families dwell near Herat. The Teimeni dwell in the Jolgha-i-Herat, from Kerrukh to Sabzwar, the few who have extended to Farrah being styled Parsivan by the Afghans. Each member of the Char Aimak knows no greater enemy than the Afghan, and all attempts to form Afghan colonies amongst them have failed. The Teimeni are of a wild nature.

TIMUR, also known as Timurlang or Timur the Lame, changed in Europe to Tamerlane. He was of one of those races of High Asia to whom in Europe the general name of Turk has been given. One writer describes him as an Uzbak Tartar; Latham describes him as a Turk, and says, whatever the Mongols were elsewhere, the Moghuls of India were Chaghtai Turk. They affected a Mongol lineage, just as Timur professed a descent from Chengiz; whilst the Chaghtai tribe to which he belonged took its name from Chengiz's huntsman Zagatai, and he believes that Chengiz himself connected his line with the Manchu. At any rate, his Mongol son bore the name of a Manchu predecessor. Again, he professed descent from a virgin. So did Apaoki and Kitan, both Manchus, before him. Also, the most famous of his ancestors was said to be Karachar Nevian or Teragay Nevian, the minister of Zagatai or Chaghtai, and the first convert to Islamism amongst the wild conquerors. In his memoirs, written by himself, Timur says, 'My father told me that we were descendants from Abu-ul-Atrak (father of the Turks), the son of Japhet.' His father is described as a chief who commanded 10,000 horse. The country between the rivers Oxus and Jaxartes, known to the Arabs as Mawur-u-Nahar, had fallen to the share of Zagatai on the death of his father Chengiz Khan in 1227, and the land had been ruled by his descendants for more than a century, and Timur's grandfather was chief of the Berlas tribe. They claimed a remote descent from the same stock as Chengiz Khan.

Turghai (Thrush) was the name of Timur's father. Timur was born at Sabzwar, also called Shahr-i-Sabz, a suburb of Kesh, on Tuesday the 5th of Shaban A.H. 736 (A.D. 1333). Timur is a Turki word meaning 'it shall shake.' Each succeeding sultan of Mawur-u-Nahar had become more degenerate and more contemptible than his predecessor, under the insolent independence of powerful vassals. But Timur succeeded in attaining supreme power. At the age of 34 he ascended the throne of Samarcand, and before he died he made himself master of Central Asia.

He overran Persia in 1386–87, and Kipchak several times between 1387 and 1389, in the latter year reaching as far as Moscow. He took Baghdad in 1395, invaded India in 1398, invaded Asia Minor and Syria in 1400–1, and defeated and captured the emperor Bajazet at the battle of Angora, 20th July 1404.

He turned his arms, without the pretext of a quarrel, on the distracted empire of Hindustan.

He has recorded his exploits in his work entitled Political and Military Institutions, which was translated into Persian by Abu Talib, and from the Persian into English by Major Davy. 'I ordered,' he relates, '1000 swift-footed camels, 1000 swift-footed horses, and 1000 chosen infantry, to march and bring me information respecting the princes of India. I learned that Tonktumish Khan had been defeated by Auroos Khan, and sought assistance from me. Received information that the princes of India were at variance with each other; that Mahmud in Dehli, Mulloo in Lahore, and Sanring in Multan were hostilely disposed towards each other. The conquest appeared to me to be easy, though my soldiers thought it was dangerous. Resolved to undertake it, and to make myself master of the Indian empire, did so. Received then the news that the emperor in Rome had invaded my western provinces, and that the people of Georgia had conquered some of my fortresses in that country. Then I thought, if I pursue my conquests in India, Eran may revolt; therefore I regulated my kingdom in Hindustan, and marched from that country against the Roman emperor, whose provinces I conquered.'

Early in the spring of A.D. 1398 (A.H. 800), his grandson Pir Muhammad, who had been employed in reducing the Afghans in the Sulaiman mountains, crossed the Indus on a line with Uch, and soon after laid siege to Multan, which occupied him for upwards of six months.

While Pir Muhammad was thus occupied, Timur, who had proceeded against the Siah Posh Kafirs, had passed the Hindu Kush by the usual route to Kābul, left that city in August, and marched by Hariab and Bannu to Dinkot on the Indus. He crossed that river by a bridge of rafts and reeds, and marched to the Hydaspes (Jhelum), and down its banks to Tulamba, reducing the country as he passed. He levied a heavy contribution on Tulamba, which was afterwards sacked, and the inhabitants were massacred by the troops,—it is said without his orders. On the approach of Timur, his grandson set out to meet him, and left a garrison in Multan; they joined near the Gara or Sutlej, 25th October 1398.

Timur thence proceeded with a light detachment to Adjudin, where he met with no sort of resistance, and spared the town as it had the tomb of a famous Muhammadan saint. He then marched to Bhatner and (9th Nov. 1398) massacred the country people who had taken refuge under its walls. The place afterwards surrendered on terms, but the town was nevertheless burned, and all the inhabitants put to the sword. He then marched to Samāna, where he joined his main body, having slaughtered the inhabitants of every place he passed. From Samāna the towns were deserted, consequently there were no more general massacres. Many prisoners, however, were taken, and on reaching Dehli, Timur put to death all of them above the age of fifteen, to the number, it is said, of 100,000. Muhammad Taghalaq fled to Gujerat. Dehli surrendered under a solemn promise of protection, and on the 17th December 1398 Timur was publicly proclaimed emperor of India. But plunder and violence brought on resistance, which led to a general massacre; some streets were rendered impassable by heaps of dead, and the gates being forced, the whole Moghul army gained admittance, and when the troops were wearied with slaughter, and nothing was left to plunder, he gave orders for the prosecution of his march. On the day of his departure (A.D. 31st December 1398) he offered up to the Divine Majesty the sincere and humble tribute of grateful praise in the marble mosque which had been erected by the emperor Firoz on the banks of the Jumna. The booty carried off from Dehli is said to have been very great, and the men and women of all ranks whom he carried into slavery formed a number so large as to overstock the slave-market at Samarcand, and they were sold at two rupees the head; among them were many of the wives and children of a proud aristocracy. His soldiers are said to have had 150 slaves, and soldiers' boys had 20 slaves to their own share; and Timur secured for himself the stone-masons for the purpose of erecting a mosque at Samarcand.

He then marched to Meerut, where there was a general massacre; and afterwards crossed the Ganges and proceeded up its banks to Hardwar, where that river leaves the mountains. Several affairs took place with Hindus on the skirts of the hills, in which Timur, though now 65 years of age, exposed his person like a private soldier, and underwent great fatigue. He marched along the foot of the mountains to Jammu, then turned southwards, fell into the route by which he first advanced, and (A.D. 10th March 1399, A.H. 801) quitted India, leaving anarchy, famine, and pestilence behind him. For two months Dehli remained without a government, and almost without inhabitants; and for 36 years there was no kingdom of India, either in name or reality.

In his route from Kābul towards Hindustan, according to Sharif-ud-Din, he went by way of Irjal, Shenuzan, Nughz, Banou (or Bannu), and thence to the Indus, at the very place where Jalal-ud-Din, king of Kharazm, fought with Chengiz Khan, and so heroically swam the river after his defeat, in 1221. Timur crossed an extensive desert in his way to Bhatnair, but on his return from the banks of the Ganges he proceeded to the north-west, along the foot of the Siwalik mountains, by Meliapur, Jullundhur, and Jummoo, to the Indus, which he crossed at the same place as before, and in the same manner; and returned to Samarcand by way of Bannu or Banou, Nughz or Nagaz, Kābul, Bacalan, and Termed. On his return to Samarcand, his first piece of justice was inflicted upon Dina, 'the greatest officer in all the land of Samarcand.' Timur had left him in the city as his magistrate when he departed, for six years and eleven months, during which time this man had neglected his duties; so Timur ordered him to be hanged, and confiscated all his goods. The justice inflicted upon this great man caused terror amongst the people, and the same punishment was ordered to be inflicted upon another man who had interceded for this magistrate. A councillor named Burado Mirza asked for his pardon if he paid a sum of 100,000 bezants of silver, each bezant being equal to a silver real. Timur approved of this, and when the man had given all he had, he was tormented to give more; and as he had no more, he was hung up by the feet until he was dead. Another piece of justice was inflicted upon a great man, who had been left in charge of 3000 horses when Timur departed, and because he could not produce them all, he

was hanged, although he pleaded that he would produce not only 3000, but 6000 horses, if he would give him time. He also ordered justice to be executed upon certain traders who had sold meat for more than it was worth, and upon shoemakers; and other traders were fined for selling their goods at a high price. The custom was, that when a great man was put to death, he was hanged, but the meaner sort were beheaded. On the 8th of January 1405, to invade China, he marched out of Samarcand, in a heavy fall of snow, and, crossing the Jaxartes upon the ice, he encamped at a place called Otrar. In February he was attacked by fever and ague, and he died on the 17th of that month, in the year 1405, aged sixty-nine, leaving 36 male descendants. Timur's body was embalmed with musk and rose-water, wrapped in linen, laid in an ebony coffin, and sent to Samarcand, where it was buried. Mirkhond mentions that he was subject to very severe attacks of illness, which not unfrequently succeeded to any change from violent motion in the field to perfect domestic repose.

Timur's autobiography was written in the Chaghtai Turki language. It is known as the Malfuzat-i-Timuri or Tuzak-i-Timuri, the Institutes of Timur. It was translated into Persian by Abu Talib Husaini, and dedicated to the emperor Shah Jahan, and was translated by Major Stewart. Thirty years after Timur's death, Sharif-ud-Din Yazdi wrote his Zafar Namah, and quoted from the diary of Timur's court. Timur, in his autobiography, relates his own intrigues, and takes credit for goodness and sincerity, with a mixture of cant and hypocrisy, with real superstition and devotion. He was essentially a wily politician, with courage, prudence, and address. Chengiz Khan was the more violent, Timur the more perfidious. Malcolm, History of Persia, says, 'Though one of the greatest of warriors, he was one of the worst of monarchs. He was able, brave, and generous, but ambitious, cruel, and oppressive.'

The furious blood-shedding that characterized his wars created a horror amongst all his Asiatic contemporaries. His Arab biographer, Ahmad bin Arab Shah, pictures him while crossing the icy plains of High Asia as met by the Spirit of Winter, which exclaimed, 'Hold in thy rapid course, thou savage tyrant.'

He died at Otrar. Feeling his strength giving way rapidly, he made signs for the Mullah Haibat Allah to perform the rites of the dying and read the Koran over his bed, and he expired in the early evening of the 7th Shaban, A.H. 807 (A.D. 17th February 1405). His body was brought to Samarcand, and placed alongside of that of his spiritual teacher, Syud Barke, who first had proclaimed Timur's career. His descendants afterwards ruled in India from A.D. 1526 to 1857. His native language was the Chaghtai Turki, which at that time prevailed from the Alagh-Tagh mountains to the Hindu Kush, and from the Caspian to the Gobi desert. On the death of Timur, his vast empire soon fell to pieces; yet the greatest and best princes that ever reigned in Muhammadan countries, were the descendants of Timur. They ruled in India until the year 1857, though only nominally from the first years of the 19th century. In 1857, by joining in a rebellion against the British, they made a final effort to regain supremacy, and the last emperor at Dehli was exiled to Rangoon in Burma, where he died in 1862. The descendants of Timur, and particularly Baber, Akbar, and Jahangir, brought many of the trees of their native countries into India. Baber, whenever he found leisure in the midst of his active life, diversified with multitudinous vicissitudes, formed a garden. Akbar followed up the plans of Baber, and introduced the gardeners of Persia and Tartary, who succeeded with many of their fruits, as peaches, almonds (both indigenous to Rajputana), pistachios, etc. The princes of the house of Timur, though despots by birth and education, present a more remarkable succession of great characters, historians, statesmen, and warriors, than any contemporaneous dynasty in any region of the world.

Of all the countries over which members of this Timur family once ruled, India alone has made any advance in material prosperity since the days of their power. Samarcand, the capital of Timur, became a heap of ruins, until restored by Russia in the 19th century. Andecan, the beloved home of Baber, is in the possession of Uzbak savages. The once rich and opulent Herat, the abode of learning, the brilliant capital of Shah Rukh and Husain Mirza, the native land of poets and historians, is now a ruinous Afghan fortress. Shiraz, made immortal by the songs of Sadi and Hafiz, where Ali of Yezd wrote the life of Timur, is an impoverished provincial town in the kingdom of the Kajar kings of Persia. Lahore and Dehli are noted for their gold-woven fabrics, and light silk muslin fabrics interwoven with gold threads, as well as for all kinds of work in tinsel or kalabatun.—*Elphinstone's India; Elliot's India; Ferrier's Caravan Journeys; Yule's Cathay; Rennell's Memoir; Markham's Embassy; Rajasthan; Vambery's Bokhara*, p. 163; *Malcolm's Persia.*

TIMURI. A tribe of the Aimak dwelling at Gorian and Kuh'sun on the western boundary of Herat, and in the villages and towns situated east of Iran, from Tarbat Shaikh Jam as far as Khaf. About 1000 of their families dwell near Herat.

TIMUR SHAH, second son of Ahmad Shah, succeeded his father as Amir of Kābul in A.D. 1773, and died in 1793. He left 36 children, of whom 23 were sons.

TIN.

Kas-din, Ressas,	ARAB.	Banda stagnata,	IT.
Abruz,	,,	Stannum,	LAT.
Khai ma phyu,	BURM.	Timah, T. putch,	MALAY.
Yang-seih,	CHIN.	T. sari, Kalang,	,,
Etain,	FR.	Falagh,	MALEAL.
Bleck, Weissblech,	GER.	Urziz,	PERS.
Zinn,	,,	Sheet, Blacha,	RUS.
Bedel,	HEB.	Trapu,	SANSK.
Kallai, Ranga,	HIND.	Hoja de lata,	SP.
Kathel,	,,	Tagaram,	TAM.
Latta,	IT.		

Tin is one of those metals which were earliest known. Though it occurs in comparatively few countries, and though it does not occur in the native state, the acquaintance of the ancients with this metal is accounted for by the circumstances that the ore is found frequently near the surface, and is easily reduced by charcoal and a moderate degree of heat to the state of metal. Tin is found in England, Saxony, Bohemia, Hungary, Chili, Mexico, Billiton, Banca, and the Peninsula of Malacca. Malacca furnishes the purest tin, and Cornwall the largest quantity. India imports it chiefly from the Straits Settlements to a

varying extent up to 48,372 cwt., valued at Rs. 22,13,323.

Tin occurs in two states of combination, the peroxide and the rare double sulphuret of tin and copper; but it is from the former that the metal is almost entirely obtained. The peroxide is found —(1) In veins, where it is intimately mixed with several other metals, as arsenic, copper, zinc, and tungsten,—this is common tin-stone; and (2) in loose rounded masses, grains, or sand in alluvial soil, in which state it is called stream-tin. The former, when reduced to the metallic state, yields block-tin; while the latter yields grain-tin, which is the purer of the two, and it is brought into commerce in these two forms. Wood-tin is in reniform and botryoidal masses, or in wedge-shaped pieces, which have arisen from their partial destruction; the surfaces are generally water-worn. Stream-tin is evidently derived from the destruction of tin veins or lodes, the lighter portions of stony matter having been carried away by the water, which has rounded the fragments of the ore. Tin was used by the Egyptians. The Greeks and Romans obtained it through the Phœnicians from England. Tin with the Egyptians formed an ingredient in some of their metallic compounds for hardening copper, and they used the alloy for forming swords and spear-heads. Its use has long been familiar to the Hindus for tinning copper, and for various compounds with copper and tin, which are remarkable for their hardness, and for the fine sounds which they emit on being struck. Dr. Wight found that an alloy of 10 of copper to 2½ of tin was the best mixture which a native made in his presence. Ancient British spear-heads are found to consist of 1 of tin to 10 of copper, and an ancient knife, of 1 of tin to 7½ of copper. Mr. Aikin found that 8 of copper to 1 of tin formed the hardest alloy.

The European alloys of tin are as under:—1 oz. of tin to 1 lb. copper, a soft gun metal; 1½ oz., harder, fit for wheels to be cut with teeth; 1½ to 2 oz., brass ordnance; 2 oz., hard bearings for machinery; 2½ oz., very hard bearings for machinery; 3 oz., soft musical bells; 3½ oz., Chinese gongs and cymbals; 4 oz., house bells; 4½ oz., large bells; 5 oz., largest bells; 7¼ to 8¼ oz., speculum metal. The tin alloy is scarcely malleable at 2 ounces; it soon becomes very hard, brittle, and sonorous. Smiths of India render the mixed metal malleable with greater proportions of tin; so do the Chinese for their gongs and cymbals, by gently striking it while hot at repeated heatings. Some years ago bronze sheathing for ships was prepared on the same principle. Teling people call such malleable bell metal Akkansu. It is formed into vessels for containing acid food, buttermilk, etc.

The island of Banca, which is a continuation of the mainland of Malacca, is of granite, graduating into syenite, and flanked by silurian slates and quartzites. The ore was worked to a considerable extent during the 18th century by the sultans of Palembang, the yield having reached 4000 tons per annum. This production afterwards fell off very much, and when the Dutch obtained the island in 1821, it did not amount to half that quantity, although it now surpasses it, viz.:—1820-29, 1500 tons; 1830-39, 2700 tons; 1840-49, 4100 tons; 1850-59, 5200 tons; 1860-69, 4700 tons; 1870-77, 4400 tons. The average annual amount of tin per mine does not exceed half a ton, though the washings at Blinjoe average one ton per annum. The island of Billiton, as a tin-mining district, only dates from 1850, the yield for the first ten years being only 180 tons. Since then, however, it has risen so rapidly that between 1870-76 over 3600 tons were raised per annum. The population of Billiton has increased from 1400 in 1860 to 28,000 in 1876; of these a good number consisted of Chinese miners. There were only 400 of these in 1860, and 4300 in 1873.

The Malayan tin district or tin field is beyond all comparison the most extensive and the richest in the world, for it stretches from Tavoy in the 14th degree of N. latitude to Billiton in the 3d degree S. latitude, that is, over 17 degrees of latitude and 10 of longitude. The richest locality in the province of Tavoy is nearly opposite the city of Tavoy on the eastern side of the mountains. Mr. Ralph Fitch, who travelled in this part of the world in about the year 1586 or 1587, says—'I went from Pegu to Malacca, passing many of the seaports of Pegu, as Martaban, the island of Tavoy, whence all India is supplied with tin, Tenasserim, the island of Junk-Ceylon, and many others.'

Tin ore of the Malay Peninsula is stream-ore, and the nearer the mountains is the more abundant. The ore is imbedded in clay at from 6 to 50 feet below the surface, and is mined by Chinese. In the seven years prior to 1874, the value of the tin exported was upwards of 1¼ million sterling, the produce of thirty mines. The ground being marked out and cleared of vegetation, a square or oblong pit is sunk, varying in depth from 40 to 80 feet, through an alluvial deposit, and the ore extracted by a series of stream works. The stanniferous deposits occur in the form of regular beds, in which the binoxide of tin is associated with coarse sand and decomposed quartz, which are removed in baskets, arranged in heaps on the surface, and exposed to sun and rain for a month or two. The washing is conducted in wooden jutters, through which a stream of water is made to flow, the dirty ore or 'work' thrown into coarse wicker-baskets immersed in water in the wooden trough and shaken about; the metallic ore and finer particles of sand and decomposed quartz are washed through the crevices of the basket into the wooden trough, through which the stream of water flows, and is there kept in constant motion by several coolies with spades, by which means all the dirt and lighter particles of sand are carried off by the stream, and the heavy ore collected in the heap when the flow of water is stopped, and the metallic ore conveyed to the smelting shed. A funnel-shaped blast-furnace is used, 6 feet high and 4 feet diameter at the mouth. The sides of the trunk and funnel-hole are shaped and backed with clay. The fused matters escape from the cavity and flow continually into an exterior reservoir hollowed out for that purpose, from which the liquid metal is ladled out into moulds, shaped in moist sand. The trunk is filled with charcoal made from the gompos tree, and combustion is accelerated by a cylindrical blowing machine, worked by eight men, of which the nozzle is introduced by an aperture. When the whole mass is brought to a red-heat, the crude ore is sprinkled on the top of the burning embers, and kept constantly fed by successive charges of charcoal and mineral. Each charge consists of

30 pikuls of washed ore, containing from 45 to 60 per cent. of tin.

Both gold and tin exist in and about Mount Ophir. The depth of the gold mines is from 70 to 200 feet, and the process of pounding the rock and washing the gold dust is simple and rude. The tin is worked in the lowlands at the depth of a few feet, and some of the ores are so rich that they contain about 80 per cent. of the metal. The whole Malay Peninsula, from Mergui, Perak, and Queda (Kedah) on the north, to the islands of Carimon and Banca, which were once probably connected with the mainland, in the south, is one rich deposit of tin, the same as that of Cornwall. It is the ordinary tin-stone or binoxide of tin. It occurs in veins, and also in rounded masses or grains. It is often beautifully crystallized, interspersed with decomposing granite, and is generally free from sulphur and arsenic. At the two extremities of the peninsular zone of elevation, Junk-Ceylon and Banca, tin-sand is diffused in such quantity that its collection has never had any other limit than the number of persons employed in it. In Junk-Ceylon and Phunga, about 13,000 pikuls are annually dug out of the soil. But in Banca, without any improvement on the usual Chinese modes of excavating, washing, and smelting, the production increased from 25,000 pikuls in 1812, when it was a British possession, to 60,000 pikuls.

The tin ore in the island of Banca is cast into ingots, weighing from 20 to 60 lbs.; the purity of these bars is superior to those from the mines in Malacca. All that is of a superior quality which is brought to China in bars is called Banca tin, while the inferior is known as Straits tin. The former sells for about £17, and the latter for £14 or £15 a pikul.

The tin of Siam is worked in the provinces of Xa-lang, Xai-ja, Xamphon, Rapri, and Rak-Bhrek.

Tin mines of Larut, or, as they are called, Klians, in the Malayan Peninsula, are about 100, averaging 60 or 70 feet in depth, and 700 feet in circumference. There were in 1867, 12,000 Chinese at work, earning five to six dollars monthly. In their superstition, no one is allowed to go near the water-wheel with his shoes on, or with an open umbrella. The mines at Cassang near Malacca, north of Ayer Panas, cover a space of five or six miles. Since the Chinese began to work them in 1844, their produce increased from 146 pikuls to 12,000 pikuls in 1852.

The Malay and Javanese term for tin, timah, is a word used in the Archipelago as a generic term for both tin and lead, the epithet white or flowery (puteh and sari) being given to tin itself, and that of black (itam) to lead, a metal with which, being entirely a foreign product, the Malayan nations are but little acquainted.—*Horsfield on the Tin of Banca; J. of Ind. Arch.*, 1848; *Winter's Burma; Morrison's Compendious Description; M'Culloch's Com. Dict.; Mason's Tenasserim; Royle, Prod. Res. of India; Crawfurd's Dictionary; Mr. Rohde, MSS.*

TINCAL, borax, Sodæ biboras, from the Sanskrit Tinkana.

TIND. Hind. of Panjab. Wide-mouthed, round-bottomed earthen jars with which the Persian well-wheel is moved.

TINDAL, in India, a petty officer of native seamen, also the non-commissioned officer over gun and store lascars.

TINDU. Hind. Ebony of Diospyros melanoxylon, *Roxb.*, also of D. tomentosa. Tindu-kaki, Tel., D. tomentosa? Tinduki, also Tumiki, Tel., D. embryopteris, *Pers.*, probably Tindu-kaki and Tindula, should be applied to different trees, as D. tomentosa, D. melanoxylon.

TINFOIL, Beggud, Hind., is tin rolled into thin sheets, and employed with the addition of mercury to cover the surface of glass, thus forming looking-glasses, mirrors, etc.—*Faulkner.*

TINGHAE, a town and harbour on the south side of the island of Chusan, and fronted by many islands, between which are several channels leading to it. Tinghae city is one mile and eight cables in circumference, and is surrounded by a wall 14¾ feet high and 13 feet wide, surmounted by a parapet 14½ feet high. A canal nearly 33 feet wide and 3 feet deep almost encircles the city, and enters it near the south gate. Large quarries of hornstone porphyry are found in the N.W. extreme of the island. Salt, arrack, and mat manufactures occupy the people.

TINNEVELLY, chief town of Tinnevelly district, Madras, is 1½ miles from the left bank of the Tambraparni, lat. 8° 43′ 47″ N., and long. 77° 43′ 49″ E.; the district lying between lat. 8° 9′ and 9° 56′ N., and long. 77° 16′ and 78° 27′ E., having the Bay of Bengal on its eastern face, and a harbour at Tuticorin. This district formed part of the ancient Pandiyan empire. It was ceded to the British in 1801. It has twenty-six polygar estates paying tribute to the British. Romish Christian missions have been here since the 17th century. The two chief towns are Palamcotta and Tuticorin, the last famed for its pearl fishery. The Protestant missionaries who have laboured in Tinnevelly have been Pohle, Schwartz, Kohlhoff, Hough, Rhenius, and Caldwell. The southern coasts have many salt marshes, which were increased at the beginning of the 19th century by inundations. There are several streams, the largest being the Tambraparni. The district produces cotton and rice. The general appearance of the district is that of an extensive plain with small hills interspersed. The Anangol pass leads to Travancore. Between Tinnevelly and Travancore is a chain of fortifications or lines which were considered very formidable at the close of the 18th century.

Agricultural castes (Vellalars, Vanniars, Shanars) amount to 62 per cent.; Pariahs, 10·4 per cent. Paravars are all Catholics. The Shanars cultivate the palmyra palm, and make jagari from its sap. They claim to be the original proprietors. Christian missions have been successful among them. Devil-worship is common in the district, but especially among the Shanars. Some Brahmans have even taken up the local devil-worship. At Srivaikuntham is a mercantile subdivision of the Vellalar caste, the Nat'ha Kottai Vellalars (Fort Vellalars), who live in a mud fort, out of which their women are not allowed to go. The three most celebrated Hindu shrines are at Tiruchendur on the sea-coast, at Papanasam on the Tambraparni, and at Kuttalam (Courtallum) on its tributary the Chittur. At both the two latter places there are beautiful waterfalls at the foot of the hills. Kuttalam is also known as Ten Kasi, *i.e.* the Southern Benares. The scenery is very lovely.

Mr. James Fergusson (Hist. of Indian Archit. p. 366) cites the great Siva temple as giving a good general idea of the arrangement of large Dravidian temples. It is a double temple. The whole enclosure measures 508 by 756 feet. Like some other large temples, it contains a thousand-pillared portico. The Muhammadans are descended from the ancient Arab traders and their converts. They are found along the whole coast of the Tamil country, and are called by the British Labbai; they call themselves Sonagar or Yonagar.

Out of the total of 5176 square miles, 1112 are uncultivable. The palmyra palm flourishes in the almost rainless tracts of red sandy soil to the south. Pearl fishery here is very ancient. It is mentioned by Pliny (A.D. 130), by Muhammad-bin-Mansur in the 12th, and by Marco Polo in the 13th century. The Venetian traveller Cæsar Frederic (1563-81) describes the fishery in a way which applies to the present day. The colour of the pearls of the Gulf of Manaar is not good. The British first entered on the pearl fishery in 1796, since which time a total sum of nearly £120,000 has been realized, at a cost of not more than £600 a year.

Between 1830 and 1861 there were no fisheries, as the beds seemed exhausted, ascribed to currents produced by the deepening of the Pambam channel. In 1861 and 1862 the fisheries realized £37,858. Chank-shells are found all along the coast, and from time immemorial have been sent to Bengal and elsewhere. Since 1876 the fishery has been taken by Government management. In 1877-78 the profit was £2290. The divers were paid £2 for a thousand shells, and the price got by Government was £9, 2s. for each thousand of good shells. Throughout the district the average rainfall is only 24·79 inches. A fall of rain is always expected late in January, sufficient to raise the rivers and replenish the tanks.

According to Tamil tradition, Chera, Chola, and Pandiya were three royal brothers, who at first lived and ruled in common at Kolkai on the Tambraparni. Eventually a separation took place; Pandiya remained in the south; Chera and Chola founded kingdoms of their own in the north and west. 'The earliest Dravidian civilisation was that of the Tamilar of the Pandiya kingdom, and the first place where they erected a city and established a state was Kolkai, on the Tambraparni river. The leader of the first or most influential Brahmanical colony is said to have been Agastya. He is fabled to be still alive, and to reside somewhere on the mountain called Agastya Malai, from which the Tambraparni takes its rise' (Caldwell's Grammar, p. 118). He is the traditional founder of the Tamil language. The first capital of the Pandiyas was Kolkai, above named; the second and more celebrated was Madura. Kolkai is the Κολχοι μεσόιον of Ptolemy (A.D. 130) and of the author of the Periplus (A.D. 80), both of whom speak of it as the headquarters of the pearl fishery, and belonging to the Pandiyan king. This place is now about three miles inland. — *Pharoah's Gazetteer; Imp. Gaz.* ix.

TINNUNCULUS ALAUDARIUS, the Falco tinnunculus, the kestrel of Europe, Asia, Africa, and the great Asiatic Archipelago, is very common in India, sometimes in large flocks. It is the commonest bird of prey in England and France.

TINOSPORA CORDIFOLIA. *Miers.*

Menispermum glabrum, *Kl.*	Cocculus cordifolius, *D.C.*
M. cordifolium, *Willd.*	C. convolvulaceus, *D.C.*
Galancha, . . . Beng.	Gilo, Gul-arich, . Panj.
Gadancha, . . ,,	Amurta guduchi, Sansk.
Gulbal, Gulo, . Dukh.	Shindi-kodi, . . . Tam.
Gul-wail, ... ,,	Galuchi, Guduchi, . Tel.
Gurcha, . . . Hind.	Manapala, Tippatige, ,,
Cita-merdoo, . Maleal.	Somavalli, Jewanti, ,,

The root is covered with loose papery bark, and its wood is composed of distinct wedges separated by depressed medullary rays. It contains much starch, and a bitter principle, is used by natives for colds and fever, in doses of six mashas, in cold infusion; also in leprosy and skin diseases. It is a useful demulcent tonic, a substitute for calumba or cetraria in the treatment of dyspepsia, also diuretic and febrifuge. Used in intermittent fevers, in which it is said only to diminish the cold stage; also in chronic rheumatism and debility after fever, and as a general tonic; and is said by some to be as powerful a febrifuge as Peruvian bark. The extract is made by boiling the root 12 hours in water, then straining and removing the woody fibres, and evaporating the liquor to dryness. It is said also to be made by squeezing out the juice of the cut root, adding water, allowing it to stand, and collecting and drying the sediment. The substance is white, very brittle, in irregular lumps, and contains a large quantity of starch.—*Powell; Roxb.; Wight; Voigt.*

TIPERAH, a corruption of Tripura, on the N.E. frontier of British India, is partly British territory, and in part under a native ruler.

The British province in 1872 had a population of 1,522,228 souls. It presents a continuous flat and open surface, with the exception of the isolated Lalmar range. All communication and transport are effected by means of boats, except during the few months of hot weather, when the village footpaths can be made use of. The Megna flows along the entire western boundary of the district, and is the only river navigable throughout the year by trading boats of four tons burden; but the Gumti, Dakatia, and Titas are navigable for craft of that size for a considerable portion of their course. The Muhuri, Bijaigang, and Borigang are all navigable by boats of four tons during at least six months of the year.

The chief aboriginal tribe of the district is the Tiperahs, of whom there were 3004. Among semi-Hinduized aboriginal tribes and Hindu castes, the most numerous are—the Chandal, numbering 81,155; the Jugi, a caste of weavers, 66,812; the Kayasth or writers, 82,804; and the Kaibartta, the chief agricultural caste of the district, 53,916. On the 31st January 1860, the Kuki or Lushai suddenly entered the district at Chhagalnaiya, burned and plundered 15 villages, murdered 185 British subjects, and carried off about 100 captives.

Hill Tiperah Native State adjoins British Tiperah, lying between lat. 22° 59′ and 24° 31′ N., and between long. 91° 12′ and 92° 24′ E. Approximate area, 3867 square miles; population, 75,792.

Tripura was dedicated either to Tripuradana, the sun-god, or to Tripureswari, the mistress of the three worlds. The worship of Siva was here associated with human sacrifice. In no part of India were more victims offered up. Till the

reign of Dharma Manik (A.D. 1407-1439), the number was 1000 a year; but Dharma ruled that human sacrifices should only be offered triennially. He appears to have been an enlightened prince. So late as 1852, some men of the Tunia Jum Mahals were tried for murder by sacrificing. This is a forest tract in the hills, and inhabited by the Mug, Chukma, Reang, and Tiperah races, and others, all more or less nomadic. The place of sacrifice was a cleared spot in the jungle, and staked round with bamboos about six feet high. The sacrificial pole is the Phula bans or bamboo, scraped and stripped at the edges, the hanging strips giving a rude notion of ornament. These sacrifices generally occurred once a year. During its celebration at Agartolla a gun was fired every evening at sunset, when every person hurried to his home. The religion now prevailing in Tiperah is a form of Hindu idolatry; but it is said that before the accession of Trilochun, they worshipped only natural objects, trees, stones, animals. A trace of that old faith is to be found in their present practice, by the Tiperah and Kachari people, and Garo, of sticking a bamboo in the ground during one of their religious festivals, and worshipping it, as Kols worship the sal tree. The sal tree and bamboo had to be dispossessed before the new settlers could derive any benefit from the soil. The Tiperahs number 34,727 persons. They are divided into 4 classes,—the pure Tiperahs, 27,148 in number, the class to which the reigning family belongs; the Jamaitya, or fighting caste, of whom there are 3000; the Nowattia, 2144; and the Reang, 2435. They are all of the same religion, and speak the same language. Their divinities are the gods of fire and water, of the forest and the earth; and sacrifices form an important part of their religion.

Tiperahs eat flesh of every description except beef, but, after the decease of a relation, abstain from flesh for a week. Both men and women are very fond of dancing. They are, as a rule, truthful and simple-minded. No man is looked on as a person of any importance till he is married. The Kuki and all the hill tribes worship local deities, said to be fourteen in number. The Tiperah raja, in addition to the hill territory known as Independent Tiperah, is the holder of a very considerable zamindari in the district of Tiperah in the plains. He receives his investiture from the British Government, and is required to pay the usual nazzerrana.—*Dalton's Ethn. of Bengal*, pp. 110, 111; *Records of Sudder Nizam at Adalat of Chittagong for* 1852.

TIPU, son of Hyder Ali, commonly known as Tipu Sultan, also Tipu Sahib, sovereign of Mysore, whose capital was Seringapatam. In the year 1783, the British and the Peshwa of the Mahrattas combined to attack Tipu, and on the 11th March 1784 a treaty of peace was concluded. But in 1789 Tipu attacked the raja of Travancore, whom the British supported, defeating Tipu. In 1790 the British entered into a treaty with the rajas of Calastri, Cartinaad, and Kotiote, also with the Nizam of Hyderabad, the Peshwa, and the raja of Coorg, to make war against Tipu, who was defeated by Lord Cornwallis on the 5th February 1792, and peace was declared on the 22d of that month and 18th March. In 1799, in consequence of Tipu's efforts to combine with foreign powers, war again broke out, and the British, the Nizam, and the Peshwa united against him. He was defeated by General Harris on the 27th March 1799, and was found amongst the slain in the storming of Seringapatam on the 4th May 1799. It is reported that when he heard that Syud Ghaffúr, his bravest commander, was killed by a cannon shot, he went to the post of danger, and afterwards fought like a man who was resolved to live or die a king. He was buried at Seringapatam, and after his death his children and other relatives were removed to Vellore, where a mutiny broke out in their favour, and then the sons were taken to Calcutta. The last of his sons, Prince Gholam Muhammad, died there on the 11th August 1872. The inscription engraved on the tomb of Tipu is,—

'Tipu Súltán cho kard ázm-i-jahád
Haq ba ú mansab-i-shahádat dád.
Sál-i-tárikh-i-ú Shahír bagúft;
Hámi-i-dín sháh-i-zamán baraft.'

'When Tipu Sultan resolved on a religious war,
The All-True gave him the dignity of a martyr;
Shahír gave the year of its occurrence—
Defender of the Faith, King of the Age has left.'

The principal events of his reign were as under—

1783, 2d January. Began to reign.
1784, 11th March. Peace with Tipu.
1788, 8th May. He invaded the low country, and war declared.
1789, 29th December. He was defeated at Travancore.
1790. First campaign under General Abercrombie.
1791. Second campaign under Lord Cornwallis.
1791, 7th March. Pettah of Bangalore assaulted.
1791, 21st March. Bangalore taken.
1792. Third campaign.
1792, 6th February. Seringapatam fortified camp stormed by Lord Cornwallis' army, and taken.
1792, 20th February. Surrendered two sons as hostages (restored 1794), Tipu ceding half his territories, paying three kror and thirty lakhs.
1798. Second war with Tipu.
1799, 5th March. General Harris entered Mysore.
1799, 4th May. Seringapatam stormed, Tipu fell. Lieut. Lawrence led the forlorn hope of left column of H.M. 74th. He was father of Sir Henry, of John Lord Lawrence, and of Generals A. W. and G. St. P. Lawrence.
1799, 5th May. Sons surrendered as hostages.

TIRAH and Chura are fertile and well-peopled valleys, enjoying a cool climate; and it was not unusual for the Peshawur sirdars and others, who had an understanding with the inhabitants, to pass the warm weather in Chura. At Chura resided Khan Bahadur Khan, Afridi, who attained immense influence amongst his tribe from the circumstance of his attendance at court during the sway of the Saddozai. Shah Shuja married one of his daughters to, and on more than one occasion found an asylum with him. The Afridi occupy the eastern parts of the hills nearest Peshawur, and the Shinwari the western parts looking upon the valley of Jalalabad. The Orakzai reside in Tirah, intermingled with the Afridi, and some of them are found in the hills south of Peshawur. It was a malik or chief of this tribe who conducted Nadir Shah and a force of cavalry by the route of Chura and Tirah to Peshawur, when the principal road through the hills was defended against him. The Shinwari, besides their portion of the hills, have the lands immediately west of them, and some of the valleys of the Safed Koh range. More westerly still, under the same hill range, they are found south of Jalalabad, and are the neighbours

of the Khogani. There are also some of them in Ghorbund, and they dwell in great numbers bordering on Bajor to the north-west, where they are independent, and engaged in constant hostilities with the tribes of Bajor and of Kafiristan. See Khyber.

TIRÉ or Tyr. TAM. Sour curdled milk.

TIREH, amongst the Afghans, the branch of a tribe or firqah.

TIRHO. SIND. A rude boat made in Sind of the leaves and stems of Typha elephantina, for crossing the Indus during its inundations.

TIRHUT (Tirhoot), formerly a district of Bengal, now divided into two districts of Darbhangah and Muzaffarpur, a tract of country between lat. 25° 28′ and 26° 52′ N., and between long. 84° 56′ and 86° 46′ E. Area, 6343 sq. miles. Muhammadans, 528,605; Hindus, 3,854,991; Rajputs, 225,419. Babhans (318,577) are the most numerous. Although lower than Brahmans or Rajputs, they nevertheless enjoy a higher rank than the Sudra castes. Kayasth caste (70,992) comes next; Goala, 526,683. Koeri (227,046), the best spade-husbandmen in the country; they are identical with the Kachi of the North-Western Provinces, and are the chief cultivators of the poppy. Kurmi (142,303), though generally engaged in agriculture, make good soldiers. Chamar, 171,793. The principal manufactures of Tirhut are indigo, saltpetre, coarse cloth, pottery, and mats.—*Imp. Gaz.*

TIRKHAN, a carpenter race in the Panjab. The Kaminan, the Tirkhan, Lohar, and Chamar, etc., are agricultural labourers, who receive certain dues for their work.—*Powell.*

TIRNI. HIND. A grazing tax. There are t'hul tracts of greater or less extent in the various districts of the Panjab, and some of them chiefly valuable for the grazing they yield to large herds of cattle, who pay 'tirni' or grazing tax to Government.

TIRSING and Khanda, double-edge swords of the Rajputs.

TIRT'H or Tirt'ha. SANSK. Any Hindu shrine or holy place to which Hindus make pilgrimages. In the Padma Purana, a guru, a father, a wife, a son, are considered tirt'has. Tirthan or Tirthan-kara, TAM., is a temple priest, a worshipping priest. Amongst the Jaina sect, a deified mortal who has passed out of the circle of transmigrations; he is worshipped. Tirt'ha or Indra, a branch of the Dandi sect. Tirthahalli, a municipal village in Shimoga district, Mysore, in lat. 13° 41′ N., and long. 75° 17′ E., on the left bank of the Tunga river, 30 miles south-west of Shimoga town. It derives its name from the number of tirt'has or sacred bathing-places in the Tunga. One of the hollows scooped out by the rushing water is ascribed to the axe of Parasu Rama, and at the Rameswara festival, held for three days in the month Margashira, thousands of persons bathe in this hollow.

Tirthankara is the generic title of the 24 deceased saints, persons held sacred by the Jains, deified mortals, viz.—

Rishaba.	Sitala.	Malli.
Ajita.	Sreyansa.	Manisuvrata.
Sambhava.	Vasu Pujara.	Nami.
Abhivandana.	Vimala.	Nemi.
Sumati.	Ananta.	Parsva.
Padmaprabhu.	Dharma.	Mahavira Swami or Vardhamani.
Supursva.	Tanti.	
Chandraprabhu.	Kuntu.	
Pushpadhanta.	Ara.	

TIRU, an adjective signifying venerable, divine, or sacred, prefixed to many names. In the south of India it is a prefix to holy places, as Tripatur, Triputty; also to many religious books and writers on religion as an attribute. It is the Dravidian dialectal change from Sri. Tirunama, the holy name. Tiruniru, the holy ashes. Tirunur undai, TAM., also Tirunut undi, TEL., balls of cow-dung ashes. Tirupad, a titular appellation of the native princes of Malabar, as the Tirupad of Nelambur. Tirupati or Tripati, in lat. 13° 27′ N., long. 79° 26′ E., in the Carnatic, 4 miles N. of the Surnamuki. Level of the plain is 507 feet. Tiruvachaka, a famous Saiva work.—*Ad. Schl.; Wils.* See Nama; Tripati; Vibhuti.

TIRUCHARNAM. TAM. Curcuma longa, also a yellow paste of turmeric with which the forehead is marked with the Hindu sign of their sect.

TIRUKALYANA. TAM. Lit. the sacred or divine wedding, the name of a festival celebrated in honour of Iswara and Parvati, also of a festival celebrated in honour of Vishnu and Lakshmi.

TIRUKKAZ HUKKUNRAM, a temple 36 miles S. of Madras, well known to Europeans who visit it to see the kites fed at noon. The temple is now devoted to the worship of Siva, but an inspection of the inscriptions shows that it was once a Jain edifice, and Taranatha, in his history, in Tibetan, of Indian Buddhism, mentions this temple under the name of Paxitirtha, or, in the Tibetan corresponding name, Bird convent.—*Mr. Burnell on Inscriptions*, 1870, p. 6.

TIRUMALISAI ALVAR, one of the 12 Vaishnava Alvars. He is said to have written 206 stanzas, included in the Nalayira Pirapantam.

TIRUMAN. TAM. White clay with which the Vaishnava religionists make sectarian marks on their foreheads.

TIRU-MUKHU-STHANAM, a ceremonial by which the rulers of Travancore honour their subjects.

TIRUMULAR, a contemporary of Agastiya. Legends connected with him are given in the Tirutonder Puranam. A treatise on medicine is attributed to him, Tirumular Vaittiya Vakadam, and a theological work, Tirumulamantiram, but both are spurious.

TIRUMURTI-KOVIL, a village in Coimbatore district, Madras, situated in lat. 10° 27′ N., and long. 77° 12′ E., containing a venerated shrine of the Hindu triad, with interesting rock sculptures. Pilgrims visit the shrine on Sundays all the year round. There is one large annual festival. The temple is built exactly on the watershed; that part of the stream on which it is situated flows into the Arabian Sea, and the other part, diverted by a dam, flows into a feeder of the Kaveri (Cauvery), and thence into the Bay of Bengal.—*Imp. Gaz.*

TIRUVALLAVAR, the literary name of the author of the Kural, a book of Buddhistics, in the Tamil language, generally acknowledged to be unequalled in any of the languages of India, and amongst the Tamils Tiruvallavar occupies the first place as a moralist. He is said to have been the son of a Pariah woman by a Brahman father, and to have been brought up by a Valluvan, a priest of the Pariah caste, at Mailapur, a suburb of Madras. His real name is not known, but he is generally supposed to have lived about the 9th century. During the reign of Vamsa Sekhara, a

Pandiya ruler, a college had been established at Madura, with a council or sangattar of 48 professors, whose successors seem to have abandoned the teaching of Tamil, and devoted their attention to the cultivation of Sanskrit literature. The influence of Tiruvallavar, however, induced the Pandiya ruler to reintroduce the Tamil, on which the professors are said to have drowned themselves; but the Tamil progressed, and in the course of the 9th century there appeared a number of the most classical Tamil writers, amongst whom were the poetess Avayar, and the poet Kamben, the translator of the Ramayanum. The Kural advocates moral duties and practical virtues above ceremonial observances and speculative devotion; but it inculcates respect to Brahmans and ascetics, and alludes to Indra and to various parts of the Hindu pantheon. It is a didactic poem, with maxims on the moral aims of man, full of tender and true ideas, but adhering to the view of transmigration of souls, from which release is to be sought in the Buddhistic method. His principal work is the Kural of short lines with four and three footed strophes, with initial rhymes and alliterations in the middle. It is a tradition that he was brother of Auveyai-or Avayar. He lived at St. Thomé, and appears to have had an intimate friend called Elela Singan.

TIRUVASAKAM, a Tamil book by Manikkavasakar of the 8th century, held in high esteem by the Saiva sect. They say that persons who will not be moved by it, nothing will move.

TIRYAQ FAROOQ. ARAB. This is the celebrated Theriaca Andromachi, of which the Tencrium chamædrys, the common germander, forms an ingredient. The words, however, are merely the Greek and Arabic for the best sorts of treacle, and this substance being esteemed in Baghdad as an antidote for snake-bites, Tiryaq has come to be applied as a general term for antidote. The substance is in much request in Beri-beri. This is a black extract, imported, carefully packed in a small tin box; a powerful stimulant. It is given in a sort of convulsive disorder called 'seet,' catalepsy; one tola costs six or eight rupees.—*Genl. Med. Top.* p. 152.

TISTA (Teesta, Trisrota), a large river of Northern Bengal. It rises in the Chatamu Lake, Tibet, but is said to have another source below Kanchinjinga in Independent Sikkim. After passing through Sikkim, the Tista is the boundary between Darjeeling and Sikkim for some distance, till it receives the waters of the Great Ranjit, in lat. 27° 6′ N., and long. 88° 29′ E., when it turns to the south, and, after flowing through the hill portion of Darjeeling district, passes through Jalpaiguri and Rangpur, and finally falls into the Brahmaputra below Bagwa in the district of Rangpur. The Tista debouches on the plains through a gorge known as the Sivak Gola pass. It has many old channels.

TITHE, the younger daughter of Kasyapa, the mother of the giants, the Titans or Daitya. See Genesis vi. 4.

TITHI, a lunar day, and also the anniversary of the decease of a parent, elder brother, etc. In Hindu reckoning of time, those lunar days on which the sun does not rise (Suryo-du-ya nahin) are struck out; those in which it rises twice are Virdh, or additional; and since, according to the Hindus, the Tithi is 22 min. 31·9 sec. less than the mean solar day, it is obvious such circumstances will occur about once in 64 days, or six times in the course of the lunar year. The Tithi of each half month are named after the moon's age, as follows:—

1 Prathami or Pratapada.	5 Panchami.	10 Dasami.
2 Dwitya.	6 Shasthi.	11 Ekadasi.
3 Tritiya.	7 Saptami.	12 Duadasi.
4 Chaturthi.	8 Ashtami.	13 Triadasi.
	9 Navami.	14 Chaturdasi.

The 15th from Shukla Pratapada is Purnima or full moon; and the 15th from Krishna Pratapada is Amavasya or new moon. The Hindu zodiac is divided into twenty-seven lunar mansions or Nakshatra of 13° 20′ each, probably originating in the revolution of the moon being performed in little more than 27 days.

TITLES, badges, and flags have been in use amongst all nations, through all ages. Rulers adopt them in order to assert for themselves their own chiefship, and they have conceded them as distinguishing designations to the eminent of their subjects. Even Mahomed carried the black flag of his tribe, although he in every manner opposed all attempts at music, poetry, and painting, and prohibited all representations of living things. Angels, he said, enter not into a house where is a dog or a picture; but the khalif vicegerents who succeeded him were less strict, and Abdul Malik is said even to have decorated the doors of a mosque at Jerusalem with portraits of their great apostles. At the battle of Bedr in the 2d year of the Hijira, the white flag of the Beni-Aus was unfurled. A little later Mahomed's own black standard led the Muslims to the sack of Khaibar, and the Abbassi khalifs continued the use of the black flag throughout their rule.

Ancient Egypt had a system of heraldry. In the 14th and 15th centuries A.D. the Muhammadans of Egypt had a system of heraldry, but it was not hereditary, and died out. But the Crusaders adopted the use of armorial bearings from the Saracens, and the Turk, Mongol, and Manchu distinguish their tribes and clans by banners of different colours.

In Europe, where,—whether it be by a crown or a collar; a star, a cross, or a chain; a medal, a device, or a seal; a spur of honour or a sword of honour; a mantle, a ribbon or scarf, or any of the standards designative of military or naval rank,—sovereigns recompense merit of every denomination without making the gifts burdensome to their subjects, neither the treasure of the State nor the Civil Pension List being in any way affected by such royal benefactions.

In Great Britain there are seen fifty-three titular insignia, besides nine or ten recognised Orders granted by allies, and the badges of the Orders of the Garter, the Bath, the Thistle, and St. Patrick are to be seen suspended by blue, green, red, and pale-blue ribbons. During the latter half of the 18th century, the fortunes of the British in India were much bound up with those of the Walajah family, nawabs of Arcot. Their chiefship may be regarded as a type of the short-lived monarchies of India; and Surgeon-Major Balfour in 1858 brought to the notice of the Government that from 1801 the Walajah princes had bestowed 890 titles on 704 persons, and had given also a great number of badges.

The titles which the Walajahi family had granted for Muhammadans were nawab, jah, umra, mulk, dowlah, jung, bahadur, khan; and for Hindus, maharaja, raja, raja-raian, rae-raian, bahadur, rae and wunt; and the insignia bestowed comprised the palki and nalki palanquins, the chour whisk of feathers; the chatri and aftab giri, sunshade and umbrellas; malbus-i-khas or royal robes, with the ali-band or full-dress belt; the overcoat or nim astin, the khilat or robe of honour, with shawls and shawl-dresses, the do-shala, rumal-shal, shal-jama, and the jama-i-durdaman or brocaded dress; and separate jewels were bestowed, or a complete set, the juahar sir-a-pa. To these had been added ensigns of royalty, standards, flags, and colours and equipage, with the siphar, shamshir, and pesh kabz, shield, scimitar, and dagger; the ālam, the naobut and naqara were the standard, the royal and martial drum, with the canopy, gong, and throne, shamiana, gharial, and musnud, and the fel-ba-saz-i-tilai-wa-jarib, the elephant with gold trappings and measuring rod. The highest of all the insignia was the mahi-maratib, or fish banner; but the titular military commandants were munsubdars of 1000 to 5200, and in the civil executive were granted the ink-stand complete, the Kalm-dan-ba-laoazama.

The British in India were slow to assume the regal prerogative of coining money in their own name, and the equally sovereign duty of honouring their Indian subjects with titular dignities. Until 1835, the East India Company, although they were virtually independent rulers, continued to coin their gold and silver moneys in the name of Shah Alam, the titular emperor of India, and only in that year did the rupee bear the effigies of King William IV. Two years later, in 1837, the Order of British India of two classes, and the Order of Merit of three classes, were established to reward the sepoy soldiery for services in the field. But in the years 1855-56, the deaths of the Bhonsla rajas of Nagpur and Tanjore, and of the nawab of the Carnatic, closed the line of three native dynasties, and Surgeon-Major Balfour, while settling the affairs of the last-named prince, suggested to the Government to assume the royal duties of bestowing on the people appellations of dignity. There were in his office seven ex-servants of the deceased nawab, holders of titles, viz. Raja Girdhari Lal, Kristwunt Bahadur; Raja Eshwara Das, Dyawunt Bahadur; Raja Hulas Rae, Dya Bahadur; Raja Tej Bhan Bahadur; Rae Ruttan Chund; Rae Futteh Chund; Terazish Khan Bahadur.

The necessity for a change in the old policy was great. The East India Company, whether as merchants or rulers, had paid their servants liberally, but their rewards were restricted to this pecuniary form, and since their sway ceased, other views have been acted on. Queen Victoria, on the 1st November 1858, assumed from the E. I. Company the rule of India, and subsequently, 28th April 1876, and at Dehli on the 1st January 1877, was proclaimed Empress of India; the royal style and titles of the Queen-Empress being Indiæ Imperatrix, Victoria, by the grace of God of the United Kingdom of Great Britain and Ireland, Defender of the Faith.

The Governor-General of India, Lord Canning, on the 24th December 1859, forwarded Surgeon-Major Balfour's letter to H.M. Secretary of State for India, then Sir Charles Wood, and since then there have been instituted the Order of the Indian Empire of one grade; that of the Star of India (1861 and 1866) of three grades; and in 1878 the Imperial Order of the Crown of India for ladies. These Orders may perhaps be still further extended in order to meet the longings and wishes of the native communities.

The Queen-Empress of India rules over subjects from all the races of Asia, Aryan and non-Aryan, Semite and Turk, Mongol and Manchu, whose rulers have handed down many regal and tribal epithets which the people prize. And Asiatic titles are not single designations to mark a rank or grade, such as duke, marquis, and earl, but honorific epithets, appellations of dignity, distinction and pre-eminence of civil and military bearing. The E. I. Company's Governor-General and the Government of India were early aware of and adopted these forms, but only for themselves. The seal of Warren Hastings, the first Governor-General, was very simple, describes him as—'The pillar of the State, the support in war, Mister Hastins, the devoted servant of the victorious king Shah Alam.'

A successor designated himself on his seal—'Cream of the princes, high in dignity, privy councillor of the illustrious throne of England, Lord Mornington, Governor-General of the kingdoms under the dominion of the English Company in the region of India, the devoted servant of the victorious emperor Shah Alam, 1212.'

A little later, a successor of Marquess Wellesley was styled—'The cream of the princes, mighty in dignity, high in honour, exalted in position, the noble of nobles, Sir George Hilaro Barlow, Baronet, Bahadur, Governor-General of the countries under the dominion of the English Company connected with the country of India, devoted servant of the victorious emperor Shah Alam, Bahadur, 1805, year 1220 Hijira.'

Later on, the seal of the Supreme Government of India ran—'MDCCCXXXI., Seal of the Government of power and for the control and arrangement of the affairs of the country and islands of India, the high English Government, supreme in authority, 1831.'

Governor-General Lord Auckland's seal contains the words—'Zabdat-i-nao-nian, azim-us-shan, mushir-i-khas-i-Huzur faiz mamur badshah kaiwan-i-barga-i-Inglistan, ashraf-ul-umra, Lord George, Earl of Auckland, Governor-General, Bahadur, nazim-i-azam-i-mumalik-i-mahrusa-i-sarkar-i-Company Angriz Bahadur matalaqa-i-kashwar-i-Hind; san Isawi 1840.' Which may be rendered—'Cream of the people, of exalted dignity, member of the Privy Council of His illustrious Majesty the bountiful king of England, the noble of nobles, Lord George, Earl of Auckland, the valorous, Governor-General, the chief administrator of the countries under the rule of the brave English Company, in the year of Jesus 1840.' The Persian is the language used.

The British, while establishing the five Orders enumerated above, have not, as yet, imitated the native princes in the grant of insignia. The Ain-i-Akbari of Akbar's time names as regal insignia the aurang or throne, chattar or umbrella; the sayaban or sun-shade, and the kaukabah or golden stars, the alam or standard, the chattar-touq, and taman touq or collars. Three drums,

viz. the kowrekh or dimamah, the naqara, and dhol; with trumpet, viz. the kurna of metal, the surna, the nafir, the sing, and sank'h or chank.

In Alamgir's reign no one could of his own accord assume a chair, a palanquin, or an umbrella. A grant from the king was required to use them, and every one was punished who adopted them without authority. That emperer was styled Muhammad Mohi-ud-Din Abu-uz-Zafr, Alamgir Badshah Ghazi, year 12, year 1080; which may be rendered, Muhammad Mohi-ud-Din, father of victory, world conquering king, the victorious, year 12, year 1080.

Timur had ∴ as his arms, supposed to represent the three regions over which he ruled. His full title in the height of his power was Sultan, Kamran, Amir, Kutb-ud-Din, Timur, Kur Khan, Sahib-i-Kuran, meaning 'Sovereign, ruler, noble, polar star of the faith; Timur, of the lineage of sovereign princes, lord of the grand conjunctions.'

The Yukti Kalapataru mentions five umbrellas of Orissa, viz. the Prasada, Pratapa, Kalasa, Kanaka-danda, and Nava-danda. The rajas of Cochin have as their insignia the palanquin with umbrella, the lamp, and the chank-shell.

The balaband or head-fillet is the diadem of the Greeks, and in Mewar is the symbol of honour. In the days of her grandeur, it was held equal to any cordon of Christendom. It consists of one or more cords of floss silk and gold thread, tied round the turband, the ends hanging behind the head. It was valued as the mark of the sovereign's favour.

In 1808, Futteh Ali Shah, emperor of Persia, instituted the Order of the Lion and Sun, Sher-o-Khurshid, to decorate foreign envoys who had rendered services to his government, and it is now given to Persian subjects. In the treaty of peace with Persia of 4th March 1857, the emperor is styled 'His Majesty, whose standard is the sun; the sacred, the august, the great monarch, the absolute king of kings of all the States of Persia.' At the same time, his ambassador, then at the court of France, was styled 'His Excellency, the abode of greatness, the favourite of the king; Firokh Khan, Amin-ul-Mulk, the great ambassador of the mighty State of Persia.' This emperor takes as epithets, Ali Hazrat, Kawi Shokat, Shahnshah, also Ali Hazrat Aqdas Humayun, Shahnshah, also Sahib-i-Qaran; likewise Zil Allah, Shadow of God, and Hashmat Panah, Source of Dignity.

The honorific appellations adopted by the Asaf Jahi dynasty rulers of Hyderabad in the Dekhan have varied. In the 18th century it was Nizam-ul-Mulk Asof Jah Bahadur, Fatah Jung, commander-in-chief, devoted servant of Muhammad Shah, the king, as high in dignity as Solomon, 1140 Hijira, in the tenth year of his reign.

Later on, it was The faithful friend, the bravest man of his time, as high in dignity as Solomon, the conqueror of countries, Nizam-ul-Mulk, Nizam-ud-Dowla, Mir Nizam Ali Khan Bahadur, victorious in battle, Asof Jah, commander-in-chief, devoted servant of king Shah Alam Bahadur, the victorious emperor 19 (year of his reign); and the reigning prince (1884) is Mir Mahbub Ali, entitled Muzaffar-ul-Mumalik, Rustum-u-Dauran, Arastah-i-Zaman, Asaf Jah, Nizam-ul-Mulk, Nizam-ud-Dowla, Mir Mahbub Ali Khan Bahadur, Fatah Jung.

H.H. Nawab Sadik Muhammad, Khan, Bahadur, Grand Commander of the Most Exalted Order of the Star of India, is distinguished by the epithets Ruku-ud-Dowla, Nasrat Jung, Hafiz-ul-Mulk, Mukhlis-ud-Dowla, chief of Bahawulpur.

The ruling family here are Muhammadans of the Dawudputra race. In this territory since 1866 great improvements have been made by irrigation. The treaty of 22d October 1838 is that which exists between the States.

Nawab Mumtaz Ali Khan, Bahadur, is designated Jalal-ud-Dowla, Mustikil-i-Jang, chief of Dujana.

Kalab Ali Khan, the Muhammadan ruler of Rampur, is styled His Highness Farzand-i-Dil-Pazir-i-Dowlat-i-Inglishia, Kalab Ali Khan, Nawab of Rampur, K.G.C.S.I. and C.I.E., the Persian words meaning Heart-loved Son of the British Government.

The prince of Arcot, a relative of the former Walajahi dynasty of the Carnatic, was styled Azim Jah, Umdat-ul-Umra, Amir-ul-Umra, Madar-ul-Mulk, Umdat-ul-Mulk, Azim-ud-Dowla, Asad-ud-Dowla-al-Angrez, Zahir-ud-Dowla (name) Khan Bahadur, Zu-ul-Fiqar Jang, Fitrat Jung, Sipah Salar, Amir-i-Arkatwa, Hind, G.C.S.I.

Rajputs and Mahrattas have surnames like the races in Europe. Rajputs' are, however, too extended to be utilized, but those of the Mahrattas are in daily use. Also Hindu rulers and their dominions are sometimes distinguished by the family name of the sovereign, by the name of the capital, or by that of the territory—Sindia or Gwalior, Gaekwar or Baroda, Mewar or Udaipur, Holkar or Indore, and Marwar or Jodhpur.

Maharaja Jaya Ji Rao Sindia, the reigning sovereign of Gwalior, is of the Mahratta race, follows the Hindu faith. He is styled Mukhtar-ul-Mulk, Azim-ul-Iqtadar, Rafi-us-Shan, Wala Shikoh, Muhtashim-i-Douran, Umdat-ul-Umra, Maharaj Dhiraj, Ali Jah, Hisam-us-Saltanat, Maharaja Jyaji Rao Sindia Bahadur, Sri Nat'h, Mansur-i-Zaman, Fadvi-Hazrat Malikah Muazzamah, Rafi-u-Darjah, Inglistan, G.C.S.I. This is The absolute executive authority of the country, the mighty in power, the high in pomp, the exalted in splendour, the magnificent one of the period, the elect of nobles, the great chief, the chief par excellence, the high in dignity, the great chief Jyaji Rao Sindia, the valiant, the lord, the conqueror of the age, vassal of Her Majesty, the Honoured and Exalted Queen of England, Grand Commander of the Most Exalted Order of the Star of India.

The Holkar family are Hindu Sudras of the great Dhangar or Shepherd race. They rule over the fertile Malwa province, and are wealthy. Jaswunt Rao died in 1811, and was succeeded by his son Mulhar Rao, who died in 1833 childless. Martand Rao was adopted as his successor, but was deposed by Hari Rao. Hari Rao died in 1843 childless, was succeeded by his adopted son Khandey Rao, who died in 1844, and was succeeded by adoption by Tukoji Rao Holkar, whose title is Tukoji Rao Holkar Maharaja Dhiraj, Rajeswar, Sawai, Tukoji Rao Holkar Bahadur, K.G.C.S.I.

Ch'hatrapati is Lord of the Umbrella, the source of the Satrap of the Greeks. It is taken by H.H. Maharaja Ch'hatrapati Sivaji IV. of Kolhapur, Bhonsla family, K.C.S.I.

Ch'hatrapati is assumed also by a Mahratta lady, another of the Bhonsla family, the princess

of Tanjore, who, as mentioned by Dr. Russell, when inquiring of the Prince of Wales as to his mother's welfare, styled Queen Victoria her sister. This princess is the daughter of the last raja of Tanjore.

Chiefs of the Mahrattas are known as the Pant Pratinidhi, Pant Amatya, the Ghatge chief of Kagal, chief of Ichalkaranji, chief of Sangli, chief of Mudhol, Patwardhan. There are several Ghorpara chieftains, one of them styled Narayan Rao Ghorpara, Amir-ul-Umra of Dutwad; the Ghorpara, also, of Kapshi, and Mudhol and Sandur.

Mysore is ruled by a scion of a race who have had many centuries of dominion, with periods of grandeur and depression. Chamrajendra Wadiar, born 1862, was installed 23d September 1868, and placed in charge in March 1881. His full title is Maharaja Chamrajendra Wadiar Bahadur, Raja of Mysore. He was an adopted son of the preceding ruler, and reigns under the Partition treaty of 1799. The emblem on the flag of Mysore is the fabulous bird of Hindu mythology, called in Sanskrit the 'Gunda Bhairūnda,' and the Canarese name for it is 'Gund Warrūnda pukshee.' This mythical bird has been the principal crest of the royal family of the Wadiars of Mysore since A.D. 1399. Regarding the Gunda Bhairūnda (Benfey, Sanskrit Dictionary), Gunda signifies the temple of an elephant. Bhairūnda, in its adjective form, means formidable. As a nominative, it signifies a form of Siva, and is also the name of one of the attendants of Durga. This fabulous bird has, in the animal kingdom of Hindu mythology, the foremost place. The most powerful elephant ranks below a lion, which ranks below the sarabha, a fanciful animal, which again is inferior to the Gunda Bhairūnda. The emblems of the Maharajas of Mysore are the sankh, or conch-shell; the chara, or quoit of war; the ankusa, or elephant goad; the kuthāra, or dagger; the makara, or alligator; the matsya, or fish; the sarabha, a fabulous animal; the salva, or lion; and the sacred bird above noticed.

The Travancore ruler is H.H. Sri Padmanabha Dasa, Vanji Bala Rama Varma, Kula Shekara, Kiritapati, Manne Sultan, Maharaj Raja Rama Raja Bahadur, Shamshir Jung, G.C.S.I., Maharaja of Travancore. The family name is said to be Threpathathu Swaroopan. Its princes' titles are Rama Varma, Carela Varma, Martandha Varma. The chank-shell is one of the insignia of this race, who claim to be Kshatriya, and follow Brahmanism. The chief of their subjects are the Nair, who follow the law of uterine descent.

Among great chiefs in the Peninsula are the Vizianagram, the Venkatagiri, the Bobili, the Beder rulers of Zorapur, the raja of Wanparti; and of other representatives of ancient dynasties may be named the Zamorin raja Poonithurakon Kunnalakonatiri. In 1766, a zamorin was beleaguered by Hyder Ali; he set fire to his palace, and voluntarily perished in the flames. Since that time the zamorins have been subject to Mysore, and then to the British. At the latter part of the 18th century, a raja of Bobili acted similarly.

The descendant of the great Rama Raja is the raja of Anagundee, whose title is Sri Mudrajadhee Raja, Raja Parameswara, Sri Virapratapa, Sri Vira Teroomala, Sri Viravenkata Ramarawya, Deva Maharawya Sumstan Vidaya Nagarum.

Of the chiefs of Mewar, some have the title of Raj, others that of Rawul; some take Rawut as their distinction. Sawai is an honorific epithet adopted by several princes of Northern India, also by the chiefs of Baygoo and Bejolia; and the Bheendur and Bednore chiefs take respectively Maharaja and Thakur. Sawai means additional, a quarter more, as if to say more than a man.

Of Patiala, in the Panjab, is H.H. Maharaja Rajindar Singh, Mahindar Bahadur, Farzand-i-Khas, Daulat-i-Inglishia, Mansur-i-Zaman, Amir-ul-Umra, Maharaj Dhiraj, Rajeshar, Sri Maharaja Rajgan, chief of Patiala.

Raja Bikram Singh, Bahadur, Barar Bans, Farzand-i-Saadat, Nishan-i-Hazrat, Kaisar-i-Hind, chief of Faridkot.

H.H. Raja Hira Singh, Mahindar Bahadur, G.C.S.I., Farzand Arjamand Akidat Paiwand Daulat-i-Inglishia, Barar Bans Sarmur, chief of Nabha.

Raja Pratap Sah of Tehri, Garhwal.

H.H. Raja-i-Rajgan, Raja Raghbir Singh, Bahadur, Grand Commander of the Most Exalted Order of the Star of India, Companion of the Indian Empire, Farzand-i-Dilband, Rasakh-ul-Itkad-i-Daulat-i-Inglishia, Councillor of the Empress of India, chief of Jind.

The Indian Government addresses the Rajput ruler of Jummu and Kashmir as 'His Highness Maharaja Ranbir Singh Bahadur, Grand Commander of the Most Exalted Order of the Star of India, Companion of the Indian Empire, Sipar-i-Sultanat (Shield of the Sovereignty), Councillor of the Empress of India, Honorary General in the Imperial Army, Chief of Jummu and Kashmir.'

Outside of British boundaries, the rulers and their chiefs have similar titles;

Rana Maharaja Jung Bahadur was entitled Thonglin-Pimma-Kokang-Vang-Syan, Commander of the Army, the brave, perfect in everything, Master of the Military Affairs, the Maharaja.

Minor titles in Nepal are Maharaj, Adi Raj, Kunwar, Rawul, Rawut, Sah, Bahadur.

In Burma, the figures of a peacock and a hare are painted on the king's throne; a peacock is borne on the royal standard, and Ne-dwet-bhu-Yeng, sun-descended monarch, is one of the royal titles. The throne is painted over with figures of the peacock, and the hare typifying the descent of the king from the Solar race and the human race, which is also directly laid claim to in the title Nay-twet Buyin, sovereign of the rising sun, with the titles Khattia, implying that he has dominion over the crops, and yaza, that he can instruct men in the laws. Ein Shemen is the special title of the declared heir of the Burmese throne. It means Lord of the Eastern House. The Tsalwee of Burma is a chain worn as a badge of nobility, and has been supposed to be derived from the Brahmanical thread.

The ruling king, The-baw's titles are Yettanabohng Nay-pyee-daw, ruler of the sea and land, lord of the rising sun, sovereign of the empires of Thuma-paranta and Zampu-deepa, and of other great empires and countries, and king of all the umbrella-bearing chiefs, lord of the mines of gold, silver, rubies, amber, and the noble serpentine; chief of the Saddan or celestial elephant, and master of many white elephants; the supporter of religion, owner of the sekya (Indra's weapon), the sun-descended monarch, sovereign

of the power of life and death, great chief of righteousness, and possessor of boundless dominions and supreme wisdom, the arbiter of existence.

The white elephant of the king of Burma is called Sin-pyoo-daw, or king of elephants. When he goes forth to take the air, he is shaded by golden and white umbrellas. He and the king share between them all the eleven white umbrellas in the country. The king of men has nine; the king of elephants two, but the latter has also four golden ones. Not even the heir-apparent has a right to use the white umbrella. He must be contented with his eight golden shades. The display of a white one would be regarded as a declaration of rebellion, and would result in his immediate execution.

Siam has six classes of district governors or royal stadtholders, of whom a Phya or Paya is the highest in rank.

Anak Agong, son of heaven, is the title of the rajas of Lombok.

Amongst other titles, those of the emperor of China are Tien-tsze, Son of Heaven; also Kwa-jen, the Man who stands by Himself; and Kwa Kuin, Solitary Prince. In China, small globes, or buttons, as they are called, of mother-of-pearl and other substances, are used for distinction. Faghfoor is a common title given by the Muslims to emperors of China.

A round metal or coral or mother-of-pearl or crystal ball or button is used in China to mark the rank of their wearers. The members of the highest rank or order of nobility wear a dark red coral ball or button on the apex of their caps; the second class have one of a light red; the third class have light blue; fourth, dark blue; the fifth has a crystal ball; and the sixth, one of mother-of-pearl; the seventh and eighth, a golden ball; and the ninth and lowest rank have one of silver. Each officer may be further distinguished by the decoration of a peacock's feather. This is attached to the base of the ball or button on the apex of his hat, and slopes downwards; it is worn at the back. Tseang-Keun, the highest rank or title, is bestowed only on the Manchu. Te-tae is the highest military title. State umbrellas of the Chinese are worn only by those to whom they are granted. They are variously marked. China people of humbler rank can use paper umbrellas only. Mark Antony was censured for having united the eagles of Rome with the State umbrellas of Cleopatra.

> 'Interque signa (turpe) militaris
> Sol aspicit cornopeum.'

Titles of Japan are Daimiyo, meaning Great Name; Kugé, nobles of the Mikado's court; Samurai, military retainers of the Daimiyo, who wore two swords. Sho-gun (now abolished), Shomiyo, territorial nobles.

In India and Persia the following words form parts of titular and honorific epithets and insignia:

Abu-u-Zafr.
Achari, Achariya.
Adhi Raja.
Aga, Agha, Aka.
Ajam-Akram (Azam-Akram).
Alam.
Alamgir.
Alavi.
Alat'hi.
Ali-Jah.
Ambalakaren.
Amir.
Amir-ul-Mominin.
Amir-ul-Umra.
Anak-Agong.
Aqdas-Humayun.
Arbab.
Asaf-Jah.
Athi Kurati.
Aurangzeb.
Avargal.
Azam-ul-Umra.
Azim Jah.
Azim-ud-Dowla.
Azim-ul-Ikhtadar
Bab, Babi.
Babu.
Badshah, Basha, Padshah, Pacha.
Bahadur.
Bahadur Jung.
Bai.
Barar-Bans.
Be, Begum.
Beg.
Bhos.
Bhumia.
Bhutter, Puther.
Bhuya.
Bibi.
British India.
Cha.
Chakravarta (Chuckerbutty).
Chand.
Charriar.
Chetty, Chettiar.
Ch'hatrapati.
Choubc.
Crown of India.
Culcurni.
Curnum.
Daimiyo.
Das (Doss).
Deb, Dev.
Deo, Deo-ji, Bhanj-Deo.
Deo-Saont, Deo-Bhanj.
Desai.
Deshast'h.
Des-Kulkurni, Des-Mukh, Des-Pande.
Dever.
Dhakka.
Do-be.
Dora, Doralu, Dorasani.
Douraha.
Dowla, Dowlat.
Dya, Dya-wunt Bahadur, Dya Bahadur.
Ein-Shemen.
Eka-ch'chatra.
Elayu-Raja.
El-Mihraj (Al-Maharaja).
Excellency.
Fadvi.
Faghfur.
Faridun-Jah.
Farzand-i-Dilband
Fatteh-Jung.
Firoz-Jung.
Fitrat Jung.
Gaon-bara.
Gariki.
Garliki.
Garu.
Ghorpara.
Ghosh (Ghose).
Goraet.
Goraku.
Gouenden, Gowda
Gramani.
Grassia.
Guru.
Gurukkal.
Hafiz.
Hakim.
Hashmat-Jung.
Hashmat-Panah.
Hazrat.
Highness.
Himmat Bahadur.
Hissam-us-Sultanat.
Housha.
Huzur.
Ikhtiar.
Imad-ud-Dowla.
Imam.
Indiæ Imperatrix.
Indian Empire.
Ishan.
Iyah, Iyen-Iyengar, Ayah.
Izzat-Akram.
Jag-Deb.
Jaghirdar.
Jah.
Jalal-ud-Dowla.
Jam.
Jamnepa Kara.
Janab.
Jonakan.
Jotidar.
Jung.
Kaisar.
Kalokhikos (Catholicus).
Kamran.
Kanam.
Karta.
Kayamal.
Kazi-ul-Kazat.
Khajah, Khoja.
Khakan.
Khan, Khanum.
Khattia.
Khone.
Kirita-Pati.
Kiriyathil.
Komatti.
Konar, Kone.
Kowtan.
Kudumpan.
Kuge.
Kula-Shekara.
Kurathi.
Kumara Raja.
Kur-Khan.
Kuruppu.
Kutb-ud-Din.
Kwa-jen.
Kwa-kuin.
Lal, Lala.
Madar-ul-Mulk.
Mahant.
Maha-Prabahu.
Maharaja, Maharaji.
Maharaja-Dhiraj.
Maharaja-i-Rajgan
Maharana, Maharani.
Maharawul.
Mahdi.
Mahindra.
Makhdum.
Makkadam.
Mal (Mull).
Malik, Malikah.
Mandal.
Manne Sultan.
Mansur-i-Nizam.
Mansur Jung.
Marakor.
Mard-raj.
Martanda Varma.
Mastakl Jung.
Matampi.
Menon.
Mian.
Mir.
Miras-dar.
Mir-Waderc.
Mirza.
Misr, Misra.
Moghul, Moghulani.
Mohsan-ud-Dowla
Moin-ul-Mulk.
Mouzadar.
Muallam.
Mudali, Mudaiiar.
Mukhtar Jung.
Mukhtar-ul-Mulk.
Mukhya.
Muktashm-i-Daoran.
Muktashm-ud-Dowla.
Mulk.
Mulvi.
Mumtaz-ul-Mulk.
Murshad.
Muzaffar-ul-Mulk
Muzaffar-ul-Mumalik.
Nadan.
Naib, Nawab, Nawab-Begum.
Naidu.
Naik, Naikkan, Naiker.
Nair, Nayar.
Nambiar.
Namburi, Nambudari.
Narindar, Maha-putra.
Nasrani.
Nasrat-Jung.
Nattu-Kottiyar.
Nazim.
Ne-dwet-bhu-Yeng.
Nissa.
Nizam-ud-Dowla.
Nizam-ul-Mulk.
No-niyan.
Odiar.
Padiachi.
Padri.
Padshah, Padshazada, Padshahzadi.
Paik.
Pandaram.
Pande.
Pandya.
Panikkar.
Pantulu Gariki.
Pardhan.
Parmeswara.
Pasban.
Patel.
Pathan.
Patra, Madhapatra.
Patro.
Patwari.
Paya, Phaya.
Peshwa.
Pillai.
Pir, Pirzadah.
Polygar.
Pridhan.
Prince.
Put, Hindu-put, Mahi-put.
Puthen, Puther, Bhutter.
Rae, Rai, Rao, Roy, Rai-Rayan, Rai-Bahadur, Rao-Bahadur.
Rafi-ush-Shan.
Raja, Raji (f) Raja-Bahadur, Raja-Rayan, Raja-Dhiraj, Raja-Rajgan.
Raj-Bhat.
Ram.
Rama-Raja.
Rama-Varma.
Rana, Rani, Maha Rana, Maharani.
Rasakh-ul-Itikad
Rashid-ul-Mulk.

Rawul, Maha-rawul.	Shaikh.	kokang-vang-syan.
Rawut.	Shamshir Jung.	Tien-Tsze.
Reddi, Reddiyar.	Sharif.	Tillari.
Rukn-ud-Dowla.	Sher-wa-Khurshid	Tillati.
Rustam-i-Daoran.	Sho-miyo.	Tira-Mukhu-st' hanam.
Sad.	Singh, Sin'h, Sin'ha.	Tondaman Bahadur.
Sadiq.	Siphar-i-Sultanat.	Tseang-Keun.
Sahai, Sahi.	Sir-Desai.	Turkhan.
Sahib, Sahibah.	Sri, Shri, Sri Bahu,	Umdat-ul-Umra.
Sahib-i-Qaran.	Sri-Bhyram-Deo,	Ummittan.
Sahib-Jah.	Sri-nath, Sri-Maharaja, Sri-Raja.	Valta-maden.
Samast'han.	Star of India.	Varma.
Samba.	Subahdar.	Velma, Velama.
Sami, Swami.	Sudra.	Vinchokar.
Sam-raj.	Sultan, Sultan-us-Sulatin.	Vira-patrapa.
Samurai.	Swetata-Patra.	Vira-tirumala.
Sangi.	Syud, Syudani, Sadaat.	Wala, Wala-Shikoh.
Sar-i-Lashkar.	Taluqdar.	Wali.
Satrap.	Tamburan.	Wazir, Wazarat-mab.
Sawai, Sawai-Bahadur.	Tampi.	Wunt, Dya-wunt.
Sen.	Tanburatte.	Yaza.
Sena-Khaskil.	Te-Tai.	Zahir-ud-Dowla.
Sena-Pati.	Tewari.	Zamindar.
Serva-Karen.	Thakur, Thakurani.	Zamorin.
Set'h, Shet'h, Sethi.	Thavan.	Zil-Allah.
Sewist'han.	Thong-lin-pimma-	Zu-ul-Fiqar Jung.
Shah, Shahzadah.		
Shahin-Shah.		

—*Letter*, of 2d June 1858, No. 987, *from Surgeon-Major Balfour to Madras Government; Letter*, No. 27, of 24th December 1859, *from Governor-General, to Secretary of State for India; Records of the Government of India; Tod's Rajasthan*, i. p. 652; *Confidential Circular*, No. 2120, P., dated 18th September 1876; *Fytche*, p. 28; *Burman*, ii. p. 215; *Lane's Arabian Nights*, note 26, iii. p. 379.

TITSINGH, an officer of the Dutch East India Company, who wrote in 1819 on the Cérémonies usitées au Japon pour les Marriages et les Funerailles, and an English edition, 1822.

TIYAR, a race in Malabar, toddy-drawers and agriculturists.—*Wils.* See Teer.

TIYARI, a tribe of the Nestorians; the girls and women bathe, unrestrained by the presence of men, in the streams, or at the doors of their houses; the men neither heed nor interfere; their wives and daughters are virtuous.—*Layard.*

TO. JAPAN. China. To-Jin, a Chinaman. It is from the To or Tang dynasty of China, A.D. 618 to 906.—*Sir J. E. Reed.*

TOA, HIND., of Multan, a reservoir to receive the salt liquor in making saltpetre.

TOAD FISH, Lophius histrio. Another toad fish is the Round Diodon, Diodon orbicularis.—*Shaw.*

TOBA, a mountain range between lat. 32° 40' and 33° 40' N., and long. 66° 40' and 68° 20' E.; length 150 miles, extending N.E. from the N. side of Pisheen valley. The general elevation, 9000 feet; above Pisheen, 3500 feet. Tukatoo Hill, in lat. 30° 20' N., and long. 66° 55' E., is 11,500 feet. Country, though generally rugged, is fertile.

TOBACCO.

Bujjerbhang, Tutun,	ARAB.	Sun-putta, . . .	KASH.
Tambroca, .	BALI, JAV.	Tabacum, . . .	LAT.
Sang-yen, . . .	CHIN.	Tambracco, . .	MALAY.
Yen-ts'au, . . .	,,	Quauryete, . . .	MEX.
Jin-ts'au, . . .	,,	Tambaku, . . .	PERS.
Tan-pa, ...	,,	Tobaka, ...	POL.
Tobak, ...	DAN.	Tobaco, . .	PORT., SP.
Tabak, . .	DUT., RUS.	Dhamrapatra, . .	SANSK.
Tabac, ...	FR.	Dun-kola, . . .	SINGH.
Taback, ...	GER.	Poghei, ...	TAM.
Tabacco, ...	IT.	Poghaku, . . .	TEL.
Tabaco, ...	JAP.	Tutun dokhan, .	TURK.

Tobacco was introduced to Europe from America about the middle of the 16th century, and is now extensively cultivated in most parts of the world. The name is from the West Indian tobacco pipe, tobogo or tobacco, and has been diffused with the product through most parts of Europe, Asia, Africa, and the Eastern Archipelago.

The East Indies have long possessed esteemed varieties of the various species of the tobacco genus Nicotiana, and increasing quantities and values of the tobacco, raw and manufactured, are being exported from India. Between 1851 and 1861, the value of the exported tobacco ranged between Rs. 1,98,270 and Rs. 5,83,360. This has largely increased as under:—

	Lbs.	Rs.		Lbs.	Rs.
1880-1,	13,673,141	14,08,310	1882-3,	11,101,796	11,55,433
1881-2,	10,530,325	11,50,376			

the largest shipments being to Great Britain, America, the Persian Gulf, and Arabia.

The quantities imported into India, however, have also been large; between 1880-81 and 1882-83, about 1½ million lbs., value 6 to 8 lakhs of rupees.

Great Britain imports annually from all countries about 51,000,000 lbs., value £2,500,000; in 1883, 57,193,065 lbs. of unmanufactured tobacco, value £1,846,382, of which 49,565,605 lbs. were retained for home consumption.

In several of the countries to which it has been brought, its use has been opposed, but it supplies some want to the human body, or affords some gratification, which indicates a want. It has rarely caused injury, is believed to render alcoholic stimulants less requisite, and the general belief amongst physicians and educated non-medical men is that it is useful as a narcotic stimulant, where there is much mental toil. The betel leaf perhaps excepted, tobacco is used more extensively than any other narcotic.

Muhammadans, in a religious point of view, regard the act of smoking as an 'act indifferent,' being of the class of biddate things, which, having come into existence after the death of the prophet, are therefore neither enjoined nor prohibited by him. It is stated in the Khulasat-ut-tawarikh that tobacco was introduced into India by the Portuguese in the latter part of Akbar's reign, and the beginning of Jahangir's. Jahangir, in the fourteenth year of his reign, when at Lahore, forbade the practice,—persons who smoked were to have their lips cut. Tobacco was introduced into Persia about the same time, during the reign of Abbas II. Several persons in Lahore, who contravened this order, were subjected to the tashir punishment, *i.e.* riding on an ass with their face to the tail, and their visage blackened, this peculiar punishment being inflicted for infraction of imperial mandates. The Makhzan-ul-adwiyah says tobacco was introduced by the Portuguese from the new world (Arz-i-jadid).

To discontinue the use of tobacco does not seem to be prejudicial to health. It and opium were once allowed to prisoners in British Indian jails, under the impression that their use, in some shape or other, was essential to the preservation of health in those who had from their youth upwards freely and continuously indulged in them. On this point the Bengal Medical Board had reported that from long and confirmed habit, tobacco smoking had with many adult convicts become not so much

a luxury as a necessary of life, comparable to salt and other condiments, which nature prescribes as indispensable adjuncts to meals, and the Court of Directors considered that discretion was necessary in withdrawing tobacco from persons who had always been in the habit of using it.

The Panjab, Lower Provinces of Bengal, and Madras authorities, however, have ruled that tobacco and opium can only be granted to convicts at the express direction of the medical officer, and then only in limited quantities and for limited periods, in cases where the general health appears to suffer by their sudden and complete withdrawal from old habitués.

Three years after the withdrawal of tobacco from prisoners in the Bengal Presidency had been accomplished, Dr. Mouat presented a report to the Government of Bengal, from which it appeared that of the fifty civil surgeons in charge of jails who had watched the effect of the order, thirty-three considered that the withdrawal of tobacco from the prisoners had not been attended with injury to health, and fourteen gave undecided answers.

Varieties.—Most of the tobacco of commerce, as that of Virginia, and also that of India, is yielded by Nicotiana tabacum. N. latissima, *Muller*, and N. fruticosa are other species. N. Chinensis, *Fischer*, is the source of the large Havannah cigars. N. rustica, *L.*, indigenous in America, and now found wild in Europe, Asia, and Africa, is the source of the Latakia (Laodicea), Salonica (Thessalonica), Syrian, and Turkey tobaccos. N. Persica, *Lindley*, is the Persian or Shiraz tobacco; N. repanda, *W.*, is the source of the small Havannah or Queen's cigars; and besides these are the species N. quadrivalvis, *Pæst.*; N. nana, *Lindley*; N. multivalvis, *Lindley*.

Several of the species and varieties are grown in the south and east of Asia, and in the Archipelago. Dr. Birdwood says that N. tabacum is cultivated in the Dekhan, and N. rustica northwards; also that N. Persica has been introduced into Bombay; and in the years 1860 to 1870, the seeds of the Shiraz, Havannah, Manilla, and Maryland species and varieties were largely distributed throughout British India. In China, N. fruticosa and N. rustica, *var.* Chinensis, seem to be the plants cultivated.

Manufacture.—The soils in which the species are grown have a great influence over the chemical components of the leaf, but the various processes followed in plucking the leaves, and curing and manufacturing them into the marketable forms of tobacco, also greatly modify its quality.

Tobacco, as it occurs in commerce, is of a deep yellowish-brown colour, soft, and pliable, a little clammy, with something of a honey, mixed with a narcotic, odour; the latter, however, is not obvious in the fresh leaves. The taste is bitter, acrid, and nauseous. But the peculiar and characteristic narcotic principle of this leaf is developed, after collecting, by a fermentative process, promoted by moistening the leaves with syrup or brine.

Culture.—The tobacco plant delights in rich forest soil, particularly where limestone prevails, on account of the potassium compounds which abound in soils of woodlands, and also because in the clearings of the forests greater atmospheric humidity prevails, needful for the best development of the finest kinds of tobacco.

Various districts, with various soils, produce very different sorts of tobacco, particularly as far as flavour is concerned; and various climatic conditions will greatly modify the tobacco plant in this respect. Thus, for instance, we cannot hope to produce Manilla or Havannah tobacco in colder climates. Virgin soil with rich loam is the best for tobacco culture, and such soil should always contain a fair proportion of lime and potash, or should be enriched with a calcareous manure and ashes, or with well-decomposed stable manure. It does not answer to continue tobacco culture beyond two years on the same soil uninterruptedly.

Latakia tobacco, according to Dyer, is prepared by submitting the leaves for several months to fumigation from fir-wood.

In most of the countries warm of the East Indies, tobacco is smoked in the form of rolled cheroots or cigars or cigarettes, and the natives readily improvise a cigar or pipe, by rolling the green leaf of a tree into the form of a cone, and filling it as a pipe is filled. In Bengal generally, and in Persia, the pure tobacco is rarely smoked; but various compounds are made and smoked in hookahs of various forms, the Nargyle or Narjil of Persia, the hubble-bubble of British India generally, and the highly ornamental hookah. Nargyle is a word derived from Narel, a cocoanut, for the primitive form of hookah is the narel or hubble-bubble, a hollow cocoanut shell half filled with water. On one side of the shell is inserted a pipe, which is connected with the fire-pan and tobacco-holder (chillam); and on the other side is inserted another tube, which goes into the mouth of the smoker. When the smoker draws, the smoke from the first pipe (the end of which is under water) is drawn up with a bubbling noise through the water, and is thus cooled and purified. The coil of flexible tube (necha) of the more elaborate hookah is made of a long coil of iron wire covered with cloth and ornamented; this was invented in Akbar's time. A hookah for smoking madhan (opium), with a peculiar-shaped chillam, is called Madhaki. In Lower Bengal the lower orders frequently smoke in companies, with one hubble-bubble or narel or kalli, which are the most ordinary and cheap forms. All sitting round in a ring, the pipe passes from one to another, each taking a few whiffs as it passes. This is never done by the higher orders, nor is it done in Hindustan. The sulfah form of hookah is the commonest in Kābul and Peshawur.

Dr. Covell, in Silliman's American Journal, volume vii., showed the components of the fresh leaves of tobacco to be—1. gum; 2. a viscid slime, equally soluble in water and alcohol, and precipitable from both by subacetate of lead; 3. tannin; 4. gallic acid; 5. chlorophyle (leaf green); 6. a green pulverulent matter, which dissolves in boiling water, but falls down again when the water cools; 7. a yellow oil, possessing the smell, taste, and poisonous qualities of tobacco; 8. a large quantity of a pale-yellow resin; 9. nicotine; 10. white substance, analogous to morphia, soluble in hot, but hardly in cold alcohol; 11. a beautiful orange red dye-stuff, soluble only in acids—it deflagrates in the fire, and seems to possess neutral properties; 12. nicotianine. Ac-

cording to Buchner, the seeds of tobacco yield a pale-yellow extract to alcohol, which contains a compound of nicotine and sugar. Analysis of five samples of tobacco:—

	Argillaceous soil.		Calcareous soil.		
	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.
Potash,	29·08	30·67	9·68	9·36	10·37
Soda,	2·26	...	...	...	·36
Lime,	27·67	24·79	49·28	49·44	39·53
Magnesia,	7·22	8·57	14·58	15·59	15·04
Chloride of sodium,	·91	5·95	4·61	3·20	6·39
Chloride of potassium,	...	...	4·44	3·27	2·99
Phosphate of iron,	8·78	6·03	5·19	6·72	7·56
Sulphate of lime,	6·43	5·60	6·68	6·14	9·42
Silica,	17·65	18·39	5·54	6·28	8·34

The important mineral substances present in Havannah tobacco, examined by Hertung, are, in 100 parts of ashes—

Salts of potash,	34·15	Magnesia,	4·09
Salts of lime,	51·38	Phosphates,	9·04

These substances being for the most part insoluble in earth, must have been dissolved during the growth of the crop.

Analysis by Professor Johnston (Lectures, 2d edition) of the ash of the tobacco leaf, and the composition of a special manure for tobacco:—

Potash,	12·14	Phosphate of iron,	5·48
Soda,	0·07	Phosphate of lime,	1·49
Lime,	45·90	Sulphate of lime,	6·35
Magnesia,	13·09	Silica,	8·01
Chloride of sodium,	3·49		
Chloride of potassium,	3·98		100·00

All the ingredients which are necessary to replace 100 lbs. of the ash of tobacco leaves are present in 144 lbs. of the following mixture:—

Bone dust, sulphuric acid,	23 lbs.
Carbonate of potash (dry),	31 ,,
Carbonate of soda (dry),	5 ,,
Carbonate of magnesia,	25 ,,
Carbonate of lime (chalk),	60 ,,

A compost similar to the saltpetre beds which Napoleon employed so extensively in France, would be a good manure for tobacco lands, namely, calcareous matter, such as old mortar, dung, and the ashes of weeds or wood.

Growers in Cuba, Virginia, North and South Carolina, and the Philippine Islands select a high and dry piece of land of a siliceous nature, and combined with iron if possible. Tobacco will even lose its natural quality and degenerate by transplanting from one soil to another, although of the same temperature, and *vice versa*.

Throughout the East Indies the farmers grow the tobacco (each for his own use) upon the heap of rubbish at his own door, consisting of ashes, cow-dung, and offal of all kinds, a soil as fertile and as well manured as for the production of the poppy or opium. It is therefore often planted in the spaces enriched by animal and vegetable exuvise, among the huts of the natives.

Several efforts have been made to extend and improve the tobacco industry of British India. In 1829, under the orders of the Court of Directors, samples of Maryland and Virginia seed were sent, accompanied by a paper by Captain Basil Hall on the Virginian method of cultivation and preparation. The tobacco grown from this seed was pronounced by dealers and manufacturers in London the best sample of Indian tobacco they had ever seen. In flavour and general appearance of the leaf it approached the descriptions usually selected in the London market for cigars and pipes, viz. Havannah, San Domingo, and Amersfoort, which commanded high prices in comparison with other tobaccos; and in 1831 a select committee of the House of Commons reported that a bale of tobacco from Gujerat had fetched 6d. a pound in the open market, being a penny a pound higher than the best American tobacco. But this excellence was far from general, and a considerable quantity of private growth, which was sent to England for sale, was pronounced worthless through defective curing,—being either mouldy and fit for nothing, or brittle and broken, and suited only for snuff. Still no fault was found with the quality of the leaf; and the possibility of growing really saleable tobacco having been demonstrated, repeated experiments have since been made to discover the most suitable soils and the best modes of preparation.

About the year 1876, the Indian Government established an experimental farm at Ghazipur, on the Ganges, 800 acres, and a planter from Virginia was employed to superintend the curing of the leaf, and Ghazipur tobacco is now well known over the North-West as being as good as, if not better than, most of the imported descriptions.

The *Shiraz* tobacco of Persia (Nicotiana Persica) is much esteemed for the delicacy of its flavour, and its aromatic quality. In December the seed is sown in a dark soil, which has been slightly manured (red clayey soils will not do). To protect the seed and to keep it warm, the ground is covered with light thorny bushes, which are removed when the plants are three or four inches high; and during this period the plants are watered every four or five days,—only, however, in the event of sufficient rain to keep the soil well moistened not falling. The ground must be kept until the plants are six to eight inches high, when they are transplanted into a well-moistened soil, which has been made into trenches for them; the plants being put on the top of the ridges ten or twelve inches apart, while the trenched plots are made so as to retain the water given. The day they are transplanted, water must be given to them, and also every five or six days subsequently, unless rain enough fall to render this unnecessary. When the plants have become from thirty to forty inches high, the leaves will be from three to fifteen inches long. At this period, or when the flowers are forming, all the flower capsules are pinched or twisted off. After this operation, and watering being continued, the leaves increase in size and thickness until the month of August or September, when each plant is cut off close to the root, and again stuck firmly into the ground. At this season of the year, heavy dews fall during the night; when exposed to these, the colour of the leaves change from green to the desired yellow. During this stage, of course no water is given to the soil. When the leaves are sufficiently yellow, the plants are taken from the earth early in the morning, and while they are yet wet from the dew, are heaped on each other in a high shed, the walls of which are made with light thorny bushes, where they are freely exposed to the wind. While there, and generally in four or five days, those leaves which are still green become of the desired pale-yellow colour. The stalks and centre stem of each leaf are now removed and thrown away, the leaves are heaped together in the drying-house for three or four days more, when they are in a fit state for

packing. For this operation the leaves are carefully spread on each other, and formed into cakes of sorts, the circumference from four to five feet, and three to four inches thick, great care being taken not to break or injure the leaves. Bags made of strong cloth, but thin and very open at the sides, are filled with these cakes, and pressed very strongly down on each other; the leaves would be broken if this were not attended to. When the bags are filled, they are placed separately in a drying-house, and turned daily. If the leaves be so dry that there would be a risk of their breaking during the operation of packing, a very slight sprinkling of water is given them, to enable them to withstand it without injury. The leaf is valued for being thick, tough, and of a uniform light-yellow colour, and of an agreeable aromatic smell.

In the *Panjab*, in the years 1871-72, 92,500 acres were under cultivation for tobacco, and 5114 maunds were exported, valued at Rs. 29,184. The kinds of tobacco which are recognised are:—

1st. *Kandahari.* This is of a yellowish light colour, and has small indentated leaves like an onosma; with this kind of tobacco molasses or gur is not mixed, but as it tastes sweet, there is probably a small quantity of honey mixed with it previously; it is not twisted into any shape, but the broken leaf is left in little pieces. The stalk of the plant is used in this variety to make tobacco, just as much as the leaves, in fact there is more stalk than leaves. *Kakar* tobacco is also grown at other places, and there is Lahori Kakar, Shikarpuri Kakar, etc. The kakar is known by its small size, and the leaves are more round than the others, which are long pointed.

2d. *Baghdadi.* The seed of this is very much sought after by cultivators, on account of the abundance of the produce. It is not imported from the place whose name it takes, but probably came originally from thence.

3d. *Noki*, so called from its pointed lanceolate leaves; of this there are two sorts, the noki and the desi Panjabi.

4th. *Lambli*, a variety of which the leaves only are used; the woody stalk is of no use.

5th. *Zarda.* This is the best quality of tobacco, being of the kind called noki.

6th. *Purbi*, from Hindustan, which is chowed with chunam, supari (areca nuts), and catechu (kath); it is also smoked, but it is expensive.

7th. *Baingani.* This is very uncommon at Lahore; it is so called because its leaves are shaped like those of the egg-plant fruit, Solanum melongena.

8th. *Surati*, from Surat and Bombay; it is strong and bitter like kakar.

The ground is carefully worked up by repeated ploughing, and manured with old dung and with saliferous earth where the soil is naturally deficient of salts.

Tobacco is grown in the highly-manured fields immediately around the village site, and brackish water is said to be the best with which to irrigate it. The seed is sown in the N. of India in August and September, and transplanted in October. Its first leaf-plucking is in March; a second is in May, yields about half that of the first crop.

The average produce of a bigha of 360 Ilahi yards square, is 12 standard man of dry leaf, and of first quality, selling at Rs. 5 the man, and Rs. 2 for the refuse stalk; of inferior quality at Rs. 3 the man.

In *Oudh*, the retail price of unmanufactured tobacco is Rs. 8 the man, and that of three qualities of manufactured tobacco for smoking, at 2 to 3 seers the rupee, at 5 to 6 seers, and at 13 to 14 seers the rupee.

In the *Bombay Presidency*, tobacco is largely produced in the Kaira and Kandesh districts. In 1871-72, nearly 43,000 acres were under cultivation, and 3,262,000 lbs. were exported by sea to Bourbon, Mauritius, etc., valued at Rs. 5,64,485, and 112,000 lbs. were sent to other presidencies. Small quantities of the fine Gujerat tobacco were sent to the N.W. Provinces. In 1839, Mr. Elphinstone, collector of Ratnagherry, grew some good tobacco from Shiraz and Kazeroon seed. About the same time, Dr. Gordon grew some at the Hewra Gardens from American and Persian seed. The Shiraz and Havannah species were grown at Baroach.

In the *Madras Presidency*, the most celebrated of its tobaccos are grown in the Northern Circars, and on some of the low sandy islands or Lanké formed at the mouths of the river Krishna, also in the delta of the Godavery, where the soil is peculiarly rich and fertile, the product being known as Lanka tobacco. For Lanka cigars, the Nicotiana rustica is still grown on the islets of the Godavery, where the cultivation is rapidly increasing and is rather famous. The tobaccos of Trichinopoly and Dindigul are celebrated, and are manufactured into cheroots for Europeans.

The Dindigul tobacco is grown on a carefully-cultivated red loam. Some of the highest-priced tobacco is grown on the rich dry land, but it is too pungent for smoking. The vicinity of villages and the back yards of houses are much utilized. Heavy rains injure the quality; and as manures, the droppings of goats and sheep are used, also ashes, cattle-dung, urine, sweepings, and in Nellore saline earth.

The value of good tobacco in the district of Masulipatam is from 10 to 15 rupees a candy of 500 lbs., or about ½d. per lb. The best Lanka tobacco is from the Sitanagram island near Gutala, on the Godavery, and is sold usually at 40 rupees a candy on the spot.

The seeds of all the species, Havannah, Maryland, Virginia, Manilla, Shiraz, etc., have been widely distributed, and with some success, and the produce was largely analyzed by Mr. Broughton. In 1871-72 it was exported to the value of 5½ lakhs of rupees. The paucity in the soils of Madras of carbonate of potash prevents the tobacco plants obtaining sufficient of that substance. The ashes of the American tobaccos contain from 25 to 35 per cent. of it.

Ceylon.—Tobacco is cultivated with some attention and success by the Singhalese of the western province, the Kandyans of the interior, and the Tamils of the northern districts of the island. In 1760, Ceylon produced a considerable quantity of tobacco, principally about Jaffna, a demand having sprung up for it in Travancore and on the Malay coast. The cultivation spread to other districts of the island, Negombo, Chilaw, and Muttra. Not long after the possession of the island by the British, a monopoly was created by an import duty of 25 per cent. ad valorem, and

in 1811 the growers were compelled to deliver their tobacco into the Government stores at certain fixed rates. The culture and demand thereupon decreased. In 1843, the duty on the exports of tobacco from Ceylon amounted to £8386.

In *Bengal*, the Surat, Bhilsa, and Sandoway (Arakan) varieties of tobacco are the most celebrated. The two first are found to be good for cultivation in the districts about Calcutta. That of Singour, in Bardwan, near Chandarnagar, sells at the price of the Arakan sort. though of the same species as that cultivated in the surrounding country; and the best Bengal tobacco is grown at and about Hanglee, in the Kishnagar district. The tobacco of Chunar, on the Ganges, and more especially that of Bhilsa, were celebrated throughout India.

In 1871-72, above 500,000 acres were under tobacco cultivation, chiefly in the districts of Rangpur, Tirhut, Purniah, and Koch-Bahar, and nearly 10,104,000 lbs. were exported, chiefly to Bombay. The farmers of Koch-Bahar trust mainly to their tobacco for the money for their rents, and in the Terai it flourishes in great abundance; the soil of the Terai is very favourable. It is grown in clearances made in the jungle by the cowherd races who graze buffaloes. They collect the dung on the clearance, and after a year bring it under cultivation. In the cultivation of the Bhilsa tobacco, immense quantities of manure are used, with much wood-ashes.

Arakan tobacco, grown at Sandoway, was brought to London, and was valued at from 6d. to 8d. a pound. Some very superior tobacco, which obtained the name of Martaban tobacco, was shown by Dr. N. Wallich to be from Arakan, and not from Martaban. He described it as having a fine silky leaf. Many people pronounced it the very best they had ever tasted, surpassing the finest imported from Turkey and Persia. An extensive tobacconist said: 'A finer and better-flavoured tobacco he never saw or tasted in his life.' One of the first brokers in the city said: 'The sample of leaf tobacco is certainly of a very fine quality, and appears to have been produced from some peculiar seed and a greatly-improved cultivation and cure.' By many manufacturers it was supposed to be from the seed of Havannah or St. Domingo tobacco. For smoking, it was compared with Maryland tobacco, having the same qualities, except the flavour, which is better, and more like Havannah. The colour and leaf, moreover, were pronounced excellent for cigar-making; but for that purpose the largeness of the principal stalk, and coarseness of the small fibres in the leaf, somewhat detracted from its value.

Tenasserim tobacco is used in Burma. The Karens raise it for their own consumption, and the Burmese both cultivate it and import it. In 1884 the Burmese are cultivating largely.

In the *Philippines* very fine tobacco is grown and the Manilla cheroots are celebrated all over the globe. The quantity of raw tobacco shipped from Manilla in 1847 was 92,106 arrobas, each about a quarter of a cwt.; manufactured tobacco, 12,054 arrobas; and 1933 cases of cigars. 5220 boxes of cigars were shipped from Manilla in 1844, 73,439 millions of cigars were shipped in 1850, and 42,629 quintals of leaf tobacco. The manufacture of cigars in Manilla is a monopoly of the Government of the closest description. The cheroot which now costs, free of duty, about one halfpenny, could be tendered for half that sum. The flavour of Manilla cheroots is peculiar to themselves, being quite different from that made of any other sort of tobacco,—the greatest characteristic probably being its slightly soporific tendency, which has caused many persons in the habit of using it to imagine that opium is employed in the preparatory treatment of the tobacco, which, however, is not the case. The cigars are made up by the hands of women in large rooms of the factory, each of them containing from 800 to 1000 souls. These are all seated or squatted, Indian-like, on their haunches, upon the floor, round tables, at each of which there is an old woman presiding to keep the young ones in order, about a dozen of them being the complement of a table. All of them are supplied with a certain weight of tobacco, of the first, second, or third qualities used in composing a cigar, and are obliged to account for a proportionate number of cheroots, the weight and size of which are by these means kept equal. As they use stones for beating out the leaf on the wooden tables before which they are seated, the noise produced by them while making them up is deafening. The workers earn from six to ten dollars a month for their labour; and as that amount is amply sufficient to provide them with all their comforts, and to leave a large balance for their expenses and dress, etc., they are seldom very constant labourers, and never enter the factory on Sundays, or, at least, on as great an annual number of feast days as there are Sundays in a year.

In *Java*, the residences of Rembang, Sourabaya, Samarang, Chinbou, and Tagal present districts suited for its culture. It has been carried on with success for a good many years in the residences of Treanger, Pakalongan, and Kedu, but only for the consumption of the interior, and of the Archipelago.

Celebes.—Tobacco is cultivated in Celebes, but merely in sufficient quantity for local consumption. It is exclusively grown by the Bantik population; the mode of preparation is the same as in Java; it is chopped very fine, and mostly flavoured with arrack.

The *Japanese* grow a good deal of tobacco for their own consumption, which is very considerable. They consider that from Sasma as better than that from Nagasaki, Sinday, etc. The worst comes from the province of Tzyngaru; it is strong, of a black colour, and has a disgusting taste and smell. The tobacco from Sasma is, indeed, also strong, but it has an agreeable taste and smell, and is of a bright yellow colour. The tobacco from Nagasaki is very weak, in taste and smell perhaps the best, and of a bright brown colour. The tobacco from Sinday is very good. The Japanese manufacture the tobacco well, and persons who cannot use other tobacco can smoke that of Japan with pleasure.

China.—Tobacco seems to have been introduced into China from the west, by way of Japan or Manilla, during the 16th and 17th century, but is now grown in most of the Chinese provinces. The species seem to be the Nicotiana fruticosa, and N. rustica, *var.* Chinensis. The Russians manufacture from it and from Mongolian tobacco large

quantities of cigarettes. The tightly packed leaves are cut up into very fine threads by means of planes, and, according to Lockhart, mixed with some yellow ochre, arsenic, and other compounds. Dr. Williams says that the leaf is sometimes soaked with a solution of opium. A tobacco of Lobelia and also coltsfoot tobacco are sometimes smoked in China.

Australia.—Tobacco is cultivated in New South Wales with much success. Australia produces a leaf equal to Virginia or the most fertile parts of Kentucky, but the great difficulty is to extract the superabundant nitre, which causes a rank and disagreeable flavour. In Victoria the yield is generally large, but the scarcity of dew in some of the districts hinders the production of the best kinds. The crude kinds are obtained with ease. —*As. Soc. Journals; Exhibitions, Reports, and Catalogues; E. Buck; Sir G. Birdwood; J. E. O'Connor; Von Mueller; Powell; Poole; Royle; Forbes Watson; Ure; Don Raphael Zaragoza; Smith.*

TOBAGO CANES. This walking-stick is a product of a palm, the Bactris minor, *Jacq.*, a native of New Granada and the West Indies.—*Seeman.*

TOBBA was the hereditary title of the ancient kings of Yemen. Samarcand was said to have been built by them, and a Himyarite inscription on one of the gates testifies thereunto.—*Yule, Cathay*, i. p. 190.

TOCHARI, a nomade Turki tribe, supposed by Lassen to be the Yeu-tchi, Yu-chi, or White Huns. He places them with their Aryan kings in Upper Bactria and Sogdiana. Towards the end of the second century before Christ they consisted of five tribes.—*Cunningham's India*, p. 40.

TOD, COLONEL JAMES, many years Resident at Udaipur, in Rajputana. He devoted his leisure to the collection of the traditions, legends, genealogies, and literature connected with the Rajput race among which he was placed. He published the result of his inquiries in two very interesting quarto volumes, which contain some beautiful illustrations of Rajput scenery and architecture, entitled Annals and Antiquities of Rajasthan, also in his Travels in Western India, embracing a Visit to the Mountains of the Jains and celebrated Shrines of Hindu Faith between Rajputana and the Indus, London 1839.

TODA. This name is derived from the Tamil Toravam and Toram, a herd. The Toda have four or five clans, two of them nearly extinct, and one is endogamic. Their language is Dravidian.

They burn their dead, reverence the buffalo, and take especial notice of the bell suspended to its neck; bury weapons and personal ornaments with the remains of the dead. The men attain from 5 feet 4 inches to 6 feet 1 inch, but average about 5 feet 8 inches. The women range from 4 feet 10 inches to 5 feet 4½ inches, but average 5 feet 1 inch. The men weigh from 110 to 155 lbs., and women from 110 to 130 lbs. When Toda people meet who have been apart for some time, the young women fall on the ground before a senior, and the senior places first the right foot, then the left foot on the head. Women tattoo their arms, chest, and legs with dots. The Toga or Putkuli is worn by both sexes. The Toda is pastoral, but not nomade. They eat buffalo flesh on ceremonial occasions, but are not flesh-eaters in general. They have no weapons for the chase, neither spear nor net, nor do they construct traps or pitfalls. They are increasing in number. In 1870 the five clans numbered 713 souls, of whom 258 were men in the prime of life. The average number of children born to each woman is six, and they bear on the average from 17¼ to 37¼ years. The Toda salam to the rising and setting sun and moon, and speak a blessing on the house, 'May it be well with the male children, the men, the cows, the female calves, and every one.' The ancient bells are worshipped and attached to the necks of cattle, and called Konku-der and Mani-der, bell god, relic god. Each tirieri with its drove of cattle is in charge of the holy palal, who is regarded as a god. He is an ascetic milkman or priest, and the kavi-lal, an ascetic herdsman. No man must touch the palal or approach nearer than five yards. The Toda reverences the tudé tree, Millingtonia simplicifolia, a synonym of Meliosma simplicifolia, a plant of the Himalayas, Khassya, Sylhet, and Mishmi Hills, and in the Western Ghats from the Konkan to Courtallam. The dead have a lock of hair cut off, are burned with their face downwards, and with all their ornaments, and one or two buffaloes are sacrificed at the spot by being struck with the back of an axe on the head. The lock of hair and portions of the unburned skull are collected in a cloth and taken to the house, which continues closed until the final ceremonial. The slaughtered cattle are carried off by the Kota. Formerly many milch buffaloes were killed at the final interment of the portions of the remains that had been preserved, but since 1856 only two are sacrificed, amidst the wailing and lamentations of the relatives, who question the spirit of the deceased thus: 'Are you suffering from fever? Are your buffaloes thriving? Why did you leave us so soon? Have you gone to Amnor?' This final ceremonial is now-a-days postponed till several persons have died, and the relics are all preserved and presented together, and interred at the place of cremation. Old and barren cows are often sacrificed. The Madras Government on the 21st July 1820 ordered efforts to be made to repress their practice of destroying their infant girls, and it has now ceased. An old woman used to take the child immediately it was born and close its nostrils, ears, and mouth with a cloth, and it was then buried. The old woman got four annas as a present. The women are still (1874) fewer than the men, and the Toda woman consorts with four or five husbands. They crave for progeny, and in the manner of Genesis xvi. 2–5, xxx. 1–4, and xxxviii. 26, obtain it.—*The Todas, by Lieut.-Colonel W. E. Marshall*, London 1873.

TODAR MULL, the Kshatriya Hindu minister of Akbar, a great financier. Under his advice Akbar lightened the burdens that pressed on agriculture, abolished the capitation tax on the Hindus, abolished also the tax on religious assemblies and other imposts that weighed on the population. Todar Mull is described by Abul Fazl as entirely devoid of avarice, and quite sincere, but of a malicious and vindictive temper, and so observant of the fasts and other superstitions of the Hindu religion as to draw down on him the reproof even of Akbar.

TODD, MAJOR D'ARCY, an officer in the Bengal army, who distinguished himself in political duties

when serving in Western Afghanistan at Herat. He wrote a Memoir on Masandaran.

TODDALIA ACULEATA. *Pers., W. and A.*

T. Asiatica, *Lam.*	Scopolia aculeata, *Sm.*, *Roxb.*, *Rh.*
T. nitida, *Lam.*	Paullinia Asiatica, *Linn.*
T. rubricaulis, *Willd.*	
Kudu miris, . . SINGH.	Varagoki, ... TEL.
Kaka toddali, . . TAM.	Varra kasimi, . . . ,,
Mula karni maram, ,,	Mirapa kandra, . . TIB.
Konda kasinda, . . TEL.	

This plant has prickly stems and branches. It is one of the most common bushes on the Coromandel coast, and extends to lat. 30° N. along the base of the Himalaya mountains. All the parts are very pungent, especially the roots when fresh cut. The fresh leaves are eaten raw for pains in the bowels. The ripe berries are fully as hot as black pepper, and have nearly the same kind of pungency, They are pickled by the natives. This has a small white root, about the third part of an inch in diameter, the bark of which is bitter and sub-aromatic, and is considered as stomachic and tonic. It is given in a weak infusion to the quantity of half a teacupful in the course of the day. The fresh bark of the root is administered by the Telinga physicians for the cure of the remittent called hill fever. Roxburgh believed that this tree is possessed of very valuable stimulant properties.—*Roxb.; O'Sh.; Mason; Voigt.*

TODDY.

Palm wine, Toddy, . ENG.	Tuwak, . . . MALAY.
Sendi of date palm, HIND.	Kallu, ... MALEAL.
Tari of palmyra palm, ,,	Sura, Tari, Tadi, SANSK.
Nareli of coccanut, ,,	Khullu, . . TAM, TEL.

Toddy is the name generally given by Europeans to the sweet, refreshing liquors which are procured in the tropics by wounding the spathes or stems of certain palms, on which the sap and juices exude from the trunks or from the fruit-stalks. In the West Indies it is obtained from the trunk of the Attalea cohune, a native of the Isthmus of Panama. In South-Eastern Asia the palms from which it is collected are the gomuti, cocoanut, palmyra, date, and the kittul or Caryota urens. The gomuti palm, Arenga saccharifera, is fit to yield toddy when nine or ten years old, at the average rate of three quarts a day. On the first appearance of the fruit, one of the spadices is beaten with a short stick, on three successive days, with the view of determining the sap to the wounded part. The spadix is cut off a little way from its root or base, and the liquor which oozes out is received in pots of earthenware, in bamboos, and other vessels. When newly drawn, the liquor is clear, and in taste resembling fresh must. In a very short time it becomes turbid, whitish, and somewhat acid, and quickly runs into the various states of fermentation, acquiring an intoxicating quality. In Malacca, the gomuti, termed kabong, comes into bearing after the seventh year. It produces two kinds of Mayams or spadices,—male and female. The gomuti grows throughout many of the islands of the Eastern Archipelago, and is largely utilized by the people.

To procure the toddy or tari of the palmyra tree, the Borassus flabelliformis, at the season when the inflorescence begins to appear, and before the spathes have had time to burst, the toddy-drawer cuts off all leaves except three or four, and all or most of the spathes are effectually encompassed from end to end by thongs, to prevent the inflorescence from bursting forth. When thus tied, for three successive mornings they are beaten or crushed between the wooden battens, with the object of keeping them from bursting, and to encourage the flow of sap. On the fourth morning, a thin slice is cut from the parts of the spathes. On the eighth morning, a clear sweet liquor begins to flow from the wounded parts, and the toddy-drawer then ascends in the evening with pots or toddy receivers, in which he places the ends of the spathes, and leaves them until the morning, when they are found to contain a quantity of this liquor. The operation of attracting the juice is repeated every morning or evening until the whole spathe is sliced away. The trees are drained in this manner for several months of the year, seven or eight spathes yielding at the same time.

The toddy of the cocoanut tree (Cocos nucifera), called nira, is obtained from the flower spathes before the flowers have expanded, in a manner almost similar to what has been described of the palmyra palm. The spathe is tied with strips of the young leaves to prevent its expansion. It is cut a little transversely from the top, and beaten either with the handle of the toddy knife or a piece of hard wood, a process which is repeated morning and evening for five or six days in succession. The under part of the spathe is then taken off, to allow of its being bent, in which position it is retained by being attached to a leaf-stalk below. An earthen pot or leaf-basket is, a few days afterwards, attached to the end, and is every morning and evening emptied of the toddy which exudes into it, the quantity of which greatly varies. A little portion of the spathe is daily cut off.

Sendi toddy is procured from the date tree of India, Phœnix sylvestris, during the months of November, December, January, and February, in which period each tree is reckoned to yield from 120 to 240 pints of juice; but the mode of its extraction destroys both the fertility and the appearance of the tree. After removing the lower leaves and their sheaths, a notch is cut in the pith of the tree near the top, from which the toddy issues by a small channel, made of a bit of the palmyra leaf, into a pot suspended to receive it.

Palm wine is also extracted from the Caryota urens during the hot season. The quantities which are said to flow from it are immense, so much as a hundred pints during the twenty-four hours.

The taste of toddy in its fresh state probably varies according to the state of the weather and season of the year, which will explain the many comparisons given of it, to Poubon water, mild champagne, cider, ginger beer, perry, etc. In all eastern countries the toddy of these several trees is used for the same purposes. It is drank, though rarely, when fresh from the tree, and is then a gentle aperient, particularly useful in delicate constitutions. It is boiled down into a coarse sugar called jagari or gur, which is afterwards refined. It is fermented in the course of a day into a mildly intoxicating liquor, still known as toddy, of which several pints are partaken before intoxication comes on. It is also distilled into arrack, made into vinegar, and throughout all eastern countries it is employed as yeast, as it begins to ferment in a few hours after it is drawn. In the Peninsula of India the

ropes employed by the toddy-drawers to help them to climb the tree, are made of cow or buffalo hide, but in other countries the pliant tendrils of plants are sometimes employed. The ropes are sufficiently large to surround the tree and the body of the climber, who, by leaning backwards and throwing his whole weight on the rope, is thus enabled to retain each position he attains, while by drawing up his feet and shifting the thong in his hand to higher points, he gradually raises himself to the top of the tree. Accidents, however, are frequent and severe.

TODDY-CAT, one of the Viverridæ, Parodoxurus musanga, *Jerdon*.

TODDY-DRAWER—in Tamil, Sanar; in Malabar, Kattikaran; in Carnatica, Idiga; in Tamil, Sarai-kara; in Telugu, Kalal—is a person who draws and sells toddy, and makes and sells other spirituous liquors. In Mysore the toddy-drawers are the Hale Paik race, who speak Tulu.—*Wils.*

TODDY SHRIKE, Artamus fuscus.

TODRIA. HIND. Species of Cheiranthus; Todri safed is C. annuus, Todri surkh or lal, C. cheiri. Todri na-farmani is a Delphinium. Todri surkh is apparently the seeds of common cress (Lepidum sativum), but in all probability mistakenly, as all other specimens of cress are named halim or taratezak. Several of them are considered to be aphrodisiac. Todri safed is also Mathiola incana, *R. Br.*, the purple gilliflower.

TOFANGI. PERS. A matchlock-man, a musketeer, from Tufung, PERS., a musket.

TOGHA. ARAB. A necklace, a badge of slavery; also the Toug, ARAB., Toug or Jugum of the Romans.

TOGHRA. ARAB. A royal signature; an order; the royal titles prefixed to letters, diplomas, or other public deeds, which are generally written in a fine ornamental hand. The celebrated Husain or Abi Ismail, vizir to the Seljukian sultan Masud, was surnamed Toghrai, on account of his excellence in this kind of writing. He is known to Europe by his admired Arabic poem, the Carmen Toghrai. Being taken prisoner in a battle wherein his sovereign was defeated by his brother Mahmud, he was put to death, A.D. 1120, by Mahmud's vizir, who hated him for his great abilities and superiority in writing the Toghra character.

TOHFAT-ul-MUJAHIDIN, a work by Shaikh Zain-ul-Abidin, giving an account of the proceedings of the Portuguese against the Muhammadans from A.D. 1498 to A.D. 1583.

TOINO, a gem much valued by the Kuki race. One was priced at Rs. 3000.

TOKA. HIND. A blight; a cotton blight caused by the insect Heliocopis cupido, or Depresscaria gossypium, etc., a weevil which attacks cotton.

TOKEN BESSEY or Toucam-baso is a large group of moderately-elevated islands, extending N.N.W. and S.S.E. Wangiwani, the most north-westerly, is visible from a distance of 21 or 24 miles; the body of it is in lat. 5° 15′ 30″ S., and long. 123° 33′ E.

TO-KIO, called Yedo by Europeans, the capital of Japan.

TOKKAY. BURM. A large lizard in Further India and the Archipelago, the Gecko of the Geckotidæ, which utters the sound of 'tokkay' in a loud, distinct tone, and a stranger, if not informed of the peculiar nature of the call, would certainly imagine the word to proceed from the lips of a human being. A French traveller there, whose name was Touquet, hearing the sound at night, responded 'Eh! bien,' and it was some time before they could persuade him that he had been holding a conversation with a lizard about twelve inches long.—*Mr. Earl*, p. 52. See Gecko.

TOL. HIND. A Hindu collegiate institution; that at Naddeya is famed.

TOLA, a weight containing 12 masha, and equal to 180 grains troy; the rupee of British India, a tola, is 180 grains, or 3 drachms apothecaries' weight.

1 tola	=180 grains.	
5 tolas	=1 chittak.	
16 chittaks	=1 seer=80 tolas	= 2·057143 lbs. avoir.
40 seers	=1 mun=(or maund)=	82⅔ lbs. exactly.

The tola in use by goldsmiths and jewellers has maintained a ponderary value of about 182 or 184 grains.

TOLA-PARIKSHA. SANSK. A balance ordeal. The accused is accurately weighed in a balance, and, after certain ceremonies, is re-weighed; if lighter, the accused is innocent. It is from Tolna, to weigh.

TOLKAPPIYANAR, the author of the oldest extant Tamil grammar. He is said to have lived in a town to the south of Madura. He was the chief of the twelve disciples of Agastiya, but he quarrelled with Agastiya, and established a separate school. He wrote the grammar called the Tolkappiyam, or ancient composition. It is the oldest Tamil work extant. Dr. Caldwell places it at the very commencement of the Jaina period, or about the 8th century A.D.; but it contains quotations which must belong to still earlier works. Much of the Tolkappiyam has been lost.

TOLON NOR, a Chinese town, walled, populous, and commercial. A depot for the Kiakta goods from Russia. The workmen are skilful in modelling and casting the bells, vases, idols, and other metallic implements of Buddhism.

TOLU BALSAM, Saint Thomas' Balsam.

Baume de Tolu, . . FR.	Balsamo de Tolu, . . SP.
Tolutanischer balsam, GR.	

This is the concrete juice of the Myroxylon toluiferum. It is of a brownish-yellow colour, transparent, with the taste and odour of the white balsam of Peru.—*Faulkner.*

TOMAN. When Tavernier visited Persia in the 17th century, the toman was worth more than £3; since then it has gradually diminished in value. When Sir J. Malcolm wrote his History of Persia about the year 1820, it was worth £1; it since fell to about nine or ten shillings. Twenty rupees make a toman in Herat, which is equal to 6 rupees and 12 annas of India (or about 13s. 6d.). The toman of the Dushtistan is equal to 16 Persian rupees and 1 mahomedi; each rupee, 7 mahomedi; each of which in turn contains 8 pool-e-siah (black money, a certain copper coin); consequently a toman contains 904 pool-e-siah.

TOMATO.

Lycopersicum esculentum.	Liebes apfel, . . . GER.
Pomme d'amour, . . FR.	Pomo d'oro, ... IT.

Tomato or love-apple is a vegetable of easy culture, does not require a very rich soil, succeeds best when trained on horizontal trellises; should be thinned occasionally of superfluous shoots;

shoots; raised from seed; used in sauces and in jams.

TOMBS. The tombs of Muhammadans have usually been of earth, or unbaked brick, but every material is employed, and names even are written on the tombs. The tombstone of a man is distinguished by a raised part in the centre, and that of a woman by a depression. The prevalent form in India of Muhammadan tombs of the wealthy, is a dark or black tombstone with verses of the Koran engraved on it, and covered by a cupola. Some of these are very magnificent. Those of the Adal Shahi dynasty at Bijapur and Gogi have attracted much attention, as also have those of the Bahmani dynasty at Kulburga, the Kutub Shahi dynasty at Golconda, and the Nizam Shahi at Ahmadnaggur. The cupolas at Roza, where Aurangzeb is buried, have not any display, and that of Aurangzeb is the least ostentatious. His daughter's tomb at Aurangabad is magnificent, and many of the tombs at Dehli and Agra are great structures. That of Mumtaz Begum, known as the Taj Mahal, is particularly remarkable. The reformers amongst the Muhammadans consider that unbaked brick or earth should alone be used. In Surat, near the mosque of Mirza Shami in Mulana Chakla, is a tomb constructed in the style of the 16th or beginning of the 17th century. Its windows of perforated stone are of rare beauty. In Sind, the more remarkable tombs are those of Mirza Baki Tur Khan, of Mirza Jani Beg Tur Khan, of Dewan Soof Khan, all on the Muklee range of hills near Tatta; and that of Nawab Amir Khan at Tatta, and that of Gholam Shah Kullora at Hyderabad, are all remarkable. Gholam Shah's tomb was commenced by himself in 1765 and completed in 1768. It is situated in the northern end of the upper plateau on which the city of Hyderabad now stands. It is built of burnt brick, with glazed tiles in the inside and out. The glazed tiles were made at Nussurpur, 16 miles N.E. of Hyderabad, once a town of great importance when the river Indus ran at its base. The tomb of Gholam Shah is surrounded by a wall 12 feet high, and is now very much dilapidated. The thirteen tombs, the burial-places of thirteen emperors of the Moghul dynasty of China, are famed in China. See Architecture; Sculptures.

TOMICUS MONOGRAPHUS or T. monographica, a beetle of Northern Europe of a very destructive character to felled oak. In 1860–62, it attacked the staves of the beer barrels of the commissariat in Lower Bengal and Burma, and caused much damage and loss by the escape of the fluid. It is of the section Rhyncophora. The soldiers playing on the name called it Tipsy Tommy.

TOMYRIS, the Getic queen of Scythia. Her opponent erected Cyropolis.

TONARENG, a nomade race dwelling in the great desert of Africa, very fair, with long hair, aquiline noses, high foreheads, and thin lips. They say their prayers in Arabic, and speak a Semitic tongue. Their arms consist of a long lance with a broad head, javelins six or seven feet long, with jagged hooks at the pointed end, a round buckler (darega) of buffalo or elephant hide from Soudan, a poniard, and a broad-bladed scimitar. See Semitic Races.

TONDAI-MANDALAM, an ancient name of a tract in Southern India extending from Nellore to the Colerun river, and including North and South Arcot and the Chingleput collectorate. It was arranged in 24 kottam or fortified districts. It is described as having been an ancient wilderness known as the Ramayanum Dandacaranyam, 'the forest of the punisher,' and was inhabited by the Kurumbar, a pastoral and half-savage race, who had their own chiefs, residing in kots or forts. They were conquered by an inroad of the Vellalar from the western portion of the Peninsula in the reign of Adanda Chakravarti, in an age supposed prior to the Christian era. The Vellalar race found the clearance of the forest a task of such difficulty, that some withdrew; and the others who remained had the peculiar privileges conferred on them by Adanda Chakravarti, which are called the Kani-atchi (acre-permanency). These have survived through the political changes of centuries, and are highly valued in a large portion of the old Tondai-mandalam.

TONDAMAN, an independent chief of Tondai-mandalam. The present chief has been honoured by a title from the Viceroy. His ancestor greatly aided the British in their wars against the French. See India; Maravar.

TONGA ISLANDS lie between lat. 17° and 22° S., and long. 172° and 176° W., and consist of six principal islands. They were discovered by Tasman in 1642. The population number about 20,000. The Tonguese are real Polynesians, whilst the Fijians are of Papuan origin. They are also a much handsomer and taller people. In Tonga the women are not allowed to perform hard work; the women of Fiji carry heavy loads, do field work, and go out fishing.—*Galton; D'Ewe's China.*

TONG-KANG —? A boat or junk used in the seas of the Eastern Archipelago.

TONGLO, a mountain in Tonkin, lat. 27° 1′ 8″ N., and long. 88° 3′ 9″ E., in Sikkim, the most southern prominent point of the Singhalila ridge. The top of the mountain is 10,080 feet; the grove at the foot of the peak, with a small pool surrounded by rhododendron trees, is 9891 feet. Barometrical observations, taken simultaneously with those of Calcutta, give the height of Tonglo in Southern Sikkim as 10,078·3 feet. Colonel Waugh's, by trigonometry, 10,070·4 feet,—a remarkable and unusual coincidence.—*Hook. H. J.* i. p. 171; *Herm. Schl.*

TONGUS. The most western of the populations to which this name applies are occupants of the Lower Tunguska; some of whom call themselves Orotshong, and are called by others Tshapodzhir; the men who bear this name tattoo themselves. For the Tongus at large there is no general name, and different tribes designate themselves differently. The Manchu call all the tribes beyond the confines of Manchuria, Orotshong; the Lamut are of the sea-coast. All the Tongus belong to either Russia or China, those of China being the Manchu of Manchuria. The Manchurians, as a body, are perhaps somewhat ruder than the Mongols, and the Russian Tongus somewhat ruder than the Manchu. As a rule, they are Shamanists, and imperfect converts to Christianity, rather than Buddhists.—*Latham*, i. p. 267.

TONI, an Indian canoe, is the hollowed-out trunk of a tree; near Bombay, generally a mango tree.

TONJON, a sedan chair in use in India, open in front and on each side, carried by a single pole on men's shoulders.

TONK, a Native State in Rajputana, ruled over by descendants of the famous predatory leader Amir Khan, the companion in arms of Jeswunt Rao Holkar, who played a conspicuous part in all the dissensions which preceded the British settlement of Malwa. Amir Khan (born 1766) was by connection, habit, and disposition essentially a Pindari. Beginning life as a petty mercenary leader, in 1798 he had become commander of a large independent army in the service of Holkar in the campaigns against Sindia, the Peshwa, and the British, and in assisting to levy the contributions exacted from Rajputana and Malwa. In 1806, Holkar granted to him the State of Tonk, and he had previously received the district of Sironji. In that year, Amir Khan transferred himself and his army to the raja of Jeypore, then at war with the raja of Jodhpur; and, after crushing the latter, he changed sides and reduced the former. Having indiscriminately plundered both countries, he, in 1809, proceeded at the head of 40,000 horsemen (being joined en route by 25,000 Pindaris) against the raja of Nagpur. He was, however, warned off by the British Government, and, returning to Rajputana, his bands plundered the country. Eventually, in 1817, the Marquis of Hastings offered Amir Khan the sovereignty of all the tracts bestowed on him by Holkar, on condition of his disbanding his army, which consisted of 52 battalions of disciplined infantry, 150 guns, and a numerous body of Pathan cavalry. In this Amir Khan acquiesced. His artillery, with the exception of 40 guns, was purchased, and some of his troops enlisted in the British service. The remainder were liberally dealt with prior to disbandment, and the fort and district of Rampura were presented to the nawab by the British Government as a free gift. Amir Khan died in 1834, and was succeeded by his son Wazir Muhammad Khan, who did good service in the Mutiny. He died in 1864. He was succeeded by his son Muhammad Ali Khan. In consequence of abetting a treacherous attack on the relatives and followers of one of the chief feudatories of the State, the Thakur of Lawa, Muhammad Ali Khan was deposed by the British Government in 1867, and his son Muhammad Ibrahim Khan was placed on the musnud.—*Imp. Gaz.*

TONKIN is the cradle of the Cochin-China race, including under this name both Tonkinese and Annamese. Six of its provinces have Saigon for their capital, and up to the year 1883 were designated French Cochin-China. The Tonkinese and Annamese are of the same race, and their original settlement was in Tonkin. They speak the same language, but the pronunciation, and to some extent the orthography, differ, and the same remark is applicable to their respective connection with Chinese. The formation of all three languages is nearly identical, but Tonkinese, Annamese, and Chinese are mutually unintelligible. Three races occupy the peninsula, viz. the Chinese, the Cambojan Malays, and the Mongoloid aborigines, comprising the Moi, Loi, the Laos, and others who are equally connected with the Siamese Shans and with the Miao-tsze, Pai, Lo Lo, Sifan, and other hill tribes, to whom the Chinese have given fanciful and derogatory names. When the Tonkinese moved southwards, they drove these aborigines from the plain country into the hills, and these are now in the ranges to the west and in the kingdom of Tsiam-pa in the S.E. part of the Peninsula, where they occupy the mountains of the province Binh-Thuan, which, in 1883, the French declared annexed. Before the 15th century, both Tonkin and Annam were parts of China; but in the reign of Louis XVI. of France, the French acquired territory there, which has since been called French Cochin-China. Through a prolonged period it was a dependency of the Chinese empire, sometimes as a tributary kingdom, at others as a province of the empire. Tonkin Gulf is an extensive bight formed in the coast between the parallels of lat. 17° and 22° N., and which is rendered a deep inlet by the peninsula of Lui-chew-fu and the island of Hainan, which protect it, and in a great measure enclose it to the eastward. The entrance between Tigu Island and the south-west part of Hainan is about 110 miles wide. The Tonkin river, Thai Sinh, falls into the N.W. side of the gulf, the mouth of its western branch, called the Dornea (probably Sang-koi), being in lat. 20° 50′ N., and long. 106° 39′ E. Cachao, the capital of Tonkin, is about 74 miles up the river. In the entrance of this river there is but one flood and ebb in 24 hours, as occurs at the island of Basselan, near Mindanao, and the other islands in the Eastern Archipelago. The Tonkinese men and women are well proportioned, of an olive complexion, very much admiring the whiteness of the Europeans. Their noses and faces are not so flat as those of the Chinese. They usually wear their black hair as long as it will grow, being very careful in combing it. The common people plait it in tresses, and tie it like a great roll upon the top of their heads. But the nobility, men of law, and soldiers, tie their locks about their necks, that they may not flutter in their faces. They blacken their teeth and suffer their nails to grow, the longest being accounted the finest.—*Everard's Treatises*, p. 17.

TONKIN BEAN, Dipteryx odorata, a native of the woods of Guiana, is an oval, oblong, somewhat boat-shaped seed, one or two inches long, shining, with an oily surface marked with a network of wrinkles; colour purple-brown; odour very fragrant; taste slightly bitter, but very burning and almost caustic. They are employed as a perfume for snuff.—*Faulkner.*

TON-LE-SAP, a great lake in Camboja, 60 miles long when at the lowest, but treble that when the inundation occurs. It contains many fish.

TONS RIVER rises on the northern side of Jamnotri, in lat. 24° N., and long. 80° 30′ E., runs N.W., E.N.E., N., and falls into the Ganges a few miles below Allahabad. Length, 165 miles. It receives the Satni, Behar, Mahana, Belun, and Seoti, including small streams; 13,000 square miles drained. It runs near Sahespur in Dehra and near Ramnuggur in Allahabad district.

TONSURE is practised by many religious orders. Rome has sometimes directed her clergy to cut their hair, and at others to let it grow. The races following Hinduism, the Afghans, Persians, Arabs, and Buddhists, shave their heads in whole or in part.

TOON. TAM. The timber of the Cedrela toona,

the Toona maram of the Tamils, a tree which extends over every part of India. The botanical specimens from Nepal having frequently a sixth part added, Dr. Wallich was induced to call that variety Cedrela hexandra. There is, however, a distinct species, Cedrela serrata, which may be readily recognised by the great length of its racemes of flowers, and may frequently be seen with Sapindus acuminatus growing in the close valleys within the Himalaya. The toon tree wood resembles its congeners, Chittagong wood and mahogany, and is much used for furniture all over both Peninsulas. It is of a reddish colour. —*Royle's Ill.; Mason; Holtzapt.*

TOORBUT HYDEREE is the hilly country between Meshed and Herat. Both sides of the high-road to within forty miles of that city were subject to Persia since 1833, and held directly under Meshed. Previous to that period, many petty chiefs, who were robbers, occupied the tract.—*Sir A. Burnes in P. P.*

TOOS and Malidah are loosely-woven flannel-like cloths, very narrow, made of excellent wool, used by the Bhotias, and by the well-to-do natives of N.E. India, as coverlets and sheets.

TOO-TEE, the Chinese god of wealth, or middle heaven; a Chinese festival.

TOOTH RELIC. The sacred tooth of Buddha is in the Mallagawa or Temple of the Tooth in Ceylon. There is much ceremony when this tooth is exhibited, various orders for the opening of the chamber are requisite before the bars may be taken down and the strong box unlocked. The tooth is enclosed in manifold caskets, one within another, becoming richer and more ornamented the nearer they are to the sacred relic. The last two or three are of very fine gold, set with rubies, diamonds, and emeralds; but these, like most oriental jewels, are roughly cut and ill set.—*Frere, Antipodes*, p. 185.

TOPASS, from Topi, HIND., a hat, a person wearing a hat; a Christian of mixed descent, chiefly of Portuguese origin, employed on ship-board as a sweeper.

TOPAZ.

Topase, ... FR.	Zabarjad, ... PERS.
Topas, . . . GER., RUS.	Purperagan, . . SINGH.
Pokhraj, ... HIND.	Topacio, ... SP.
Topazio, ... IT.	Pushiaragum, TAM., TEL.
Ratna champaca, MALAY.	

The topaz of the ancients was the greenish-coloured substance now called peridot and chrysolite. The modern topaz is of a vinous orange colour, without any admixture of green. Topaz is so called from the island of Topazion in the Red Sea. Beautiful topazes of various kinds are found in the Burman dominions and in Ceylon. The topaz is divided by jewellers into two, oriental and occidental. Oriental topaz, ruby, emerald, and sapphire, consist of pure alumina, coloured with oxide of iron, varieties of corundum; and the occidental topaz contains a greater proportion of silex. The pink topaz of jewellers is the Brazilian topaz modified by the action of fire. It emulates the balas in tint and lustre. The colouring process is to envelope the stone, ready cut and polished, in German tinder, fastened with wire, and set on fire, and when fairly burned out, the topaz is found changed into a clear rose colour. One of the pencils being yellow and the other pink, the yellow is discharged by heat, leaving the pink unimpaired. Tavernier mentions (p. 150) that a large topaz was worn by the Great Moghul all the time Tavernier was in India. It weighed 181 rati and half a quarter, or 157¾ carats. It was bought at Goa for Rs. 1,81,000, or 271,500 livres.

TOPE, in Southern India, from Topu, Canarese and Telugu, a grove, usually of mango or tamarind trees. In bygone times these were largely planted throughout India in charity; owing to the diminution of the semi-religious feeling which formerly led to the planting of groves, and partly owing to the increased value of land, such deeds have now become fewer.

TOPE, a sepulchral, memorial monument, the st'hupa of the Buddhists; mound-like buildings erected for the preservation of relics. Such mounds occur at Sanchi, Bharhut, Bhilsa, near Benares, Tirhut, Behar, in Afghanistan, Tibet, Nepal, and Western Asia; also in various parts of S. India. On the demise of the Sakya Gautama Siddharta in B.C. January 543, his body was consumed, and his bones, divided into eight portions, were distributed amongst applicants, who erected st'hupas or topes over them—at (1) Rajagriha, an ancient capital of Magadha or Behar proper; (2) Visali, at Bassalor, north of Patna; (3) Kapilavastu, between Ayodhya and Gorakhpur; (4) Allakappo; (5) at Ramagrama, in the neighbourhood of Gorakhpur, and most probably (Sri-Rampura) the Selampura of Ptolemy; (6) Wetthadipo, most probably Bettiya; (7) Pawa was to the west of Visali, on the high-road to Kusinara; (8) Kusinara, equidistant between Benares and Visali, or in the position of Kusia on the Little Gundak; and (9) another tope was erected at Pipphaliwano, or the place of the charcoal tope, between Kapilavastu and Kusinara. The topes of Kābul and Jalalabad were opened by Messrs. Honigberger and Masson in 1835, and those between the Indus and the Jhelum by Generals Ventura and Court in 1833 and 1834. The topes near Benares were opened by Major Cunningham in 1835, and those at Sanchi and other places around Bhilsa were also opened by him and Lieutenant Maisey in January and February of 1857. Of the largest of the Sanchi group near Bhilsa, a plan and section of the building, with a short account of the various subjects represented in the sculptured bas-reliefs of the gateways, was published by Captain J. D. Cunningham in the Journal of the Asiatic Society of Bengal. In the topes dedicated to the celestial Buddha, the invisible being who pervaded all space, no deposit was made, but the Divine Spirit, who is Light, was supposed to occupy the interior, and was typified on the outside by a pair of eyes, placed on each of the four sides, either of the base or of the crown of the edifice. Such is the great chaitya or tope near Katmandu, in Nepal, dedicated to Swayambhunath, the Self-Existent, in which the eyes are placed on the upper portion of the building. A specimen of the regular chaitya is represented in the 3d compartment (inner face) of the left-hand pillar of the eastern gate at Sanchi, in which the two eyes are placed one above the other. Such also are the numerous ch'hod-ten in Tibet, which are dedicated to the celestial Buddha, in contradistinction to the dungten, which are built in honour of the mortal Buddhas, and which ought to contain some portion of their relics, either real or supposed. The first, ch'hod-ten, means simply

an offering to the deity; the latter, dungten, is emphatically a bone or relic receptacle. The same distinction is preserved in the Sanskrit terms chaitya and dhatugarba or dhagoba. The former is properly a religious edifice, dedicated to Adi-Buddha, while the latter is only a relic shrine or repository of ashes. The word chaitya, however, means any sacred object, as a tree, an altar, a temple, as well as any monument raised on the site of a funeral pile, as a mound or a pillar. Chaitya may therefore perhaps be only a general term for both kinds of mound; while dhatugarba or dhagoba is particularly restricted to the relic shrine.

The word tope is the same as the Pali st'hupo, and the Sanskrit st'hupa, a mound or tumulus, both of which terms are of constant use in the Buddhist books. St'hupa or tope is therefore a name common to each kind of tumulus, whether it be the solid temple dedicated to the Supreme Being, or the massive mound erected over the relics of Sakya, or of one of his more eminent followers. Tumulus, modo terra tumens, alias sepulchrum (Serv. ad Virg. Æn. ii. p. 713). In the Turkish word tepeh, which the Persians pronounce tappeh, signifying a hillock or small tumular mountain, we may fancy a resemblance to the Greek ταφος (sepulchrum) or ταφη (sepultura), and it is applied (though not exactly in this sense) to some of the sepulchral heaps near Troy.

From several passages in the Pali Buddhistical annals, it would appear that topes were in existence prior to Sakya's advent, and that they were objects of much reverence to the people. Sakya himself especially inculcated the maintenance of these ancient chaitya, and the continuance of the accustomed offerings and worship. In the sixth of his precepts to the people of Visali, the Passalæ of Ptolemy, he enjoins them to maintain, respect, reverence, and make offerings to the chaitya, and to keep up the ancient offerings without diminution. Sakya acknowledged the holy Muni, Karkutsanda or Krakuchanda, Kanaka, and Kasyapa, as his immediate predecessors. St'hupas had been erected over their relics in the neighbourhood of Kapila and of Benares. St'hupas had also been erected over supreme monarchs prior to Sakya's advent, for Sakya particularly informs his disciple Ananda that over the remains of a Chakravarti raja they build the st'hupa at a spot where four principal roads meet.

It is clear, therefore, that the tope or tumulus was a common form of tombs at that period. In fact, the tope, as its name implies, is nothing more than a regularly-built cairn or pile of stones, which was undoubtedly the oldest form of funeral memento. The topes were therefore of three distinct kinds—1st, the dedicatory, which were consecrated to the Supreme Buddha; 2d, the strictly funereal, which contained the ashes of the dead; and 3d, the memorial, which were built upon celebrated spots. Of the dedicatory topes, as it is improbable that any deposit would have been placed in them, we may plausibly conclude that the largest topes, such as those of Sanchi, Satdhara, and Bhojpur, were consecrated to the Supreme Invisible Adi-Buddha. Of the memorial topes, little is at present known. It seems nearly certain, however, that the great Manikyala tope was of this kind, for an inscription extracted from it, which begins with Gomangasa, 'of the abandoned body,' undoubtedly refers to Sakya's abandonment of his body to a hungry lion. This tope therefore dates earlier than the period of Fa Hian's Indian pilgrimage, in A.D. 400. The funereal topes were of course the most numerous, as they were built of all sizes and kinds of material, according to the rank of the deceased and the means of his fraternity. At Bhojpur, the topes occupy four distinct stages or platforms of the hill. The largest topes, six in number, occupy the uppermost stage, and were, it is believed, dedicated to Buddha; that is, either to the celestial Buddha, Adinath, or to the relics of the mortal Buddha Sakya. This view is borne out by the fact that the largest tope contained no deposit, and that the second and third sized topes yielded crystal boxes, one of which, shaped like a st'hupa, contained only a minute portion of human bone smaller than a pea. The gateways of the Sanchi tope belong to the first half of the first century of our era. The Amaravati sculptures are 300 years later than those at Sanchi, but the frescoes in the Ajunta caves are 300 years later than Amaravati, and belong to the time immediately preceding the decline of Buddhism.

The topes at Amaravati, Bharhut, Buddha Gaya, Muttra, and Sanchi have, as a feature of their style, highly ornamental rails. One at Bharhut was nine feet high.

Amaravati, its central dhagoba, was small, only 30 feet to 35 feet in diameter, or about 100 feet in circumference and 50 feet high. Amaravati was visited in the year 639 by the Chinese pilgrim Hiwen Thsang. It had then been deserted for more than a century, but he describes its magnificence in glowing terms. Many of its sculptured slabs had been brought to Madras, which Surgeon-Major Balfour placed in the museum that he founded, and then sent them to England, where they have been erected, with some others since received, on the wall of the great staircase of the British Museum.

Sarnath, a town near Benares, is famed for a Buddhist tope or st'hupa. It contains no relics, and was erected to mark a place where Buddha stayed. It is 93 feet in diameter, built of stones clamped together with iron. It is said to have been destroyed by the Muhammadans, A.D. 1017, before its completion.

Near Bhilsa, a town in Bhopal, are five or six groups of topes—at Sanchi, Sonari, Satdhara, Bhojpur, and Andher. They are in a district not exceeding ten miles E. and W., and six miles N. and S., and are in number between 25 and 30. The chief is the great tope of Sanchi, attributed to Asoka. Some of the topes contain relics of friends of Buddha and of missionaries. The Sanchi tope is 106 feet in diameter, and 42 feet in height. One at Satdhara is 101 feet in diameter. They are the best preserved of all the topes in India. The four gateways or torans of the Sanchi tope are covered with the most elaborate sculptures. The pillars are 33 feet to 35 feet in height. The sculptures generally represent scenes from the life of Buddha when he was Prince Siddharta, also scenes from the Jataka or legends; likewise the worship of trees, of dahgopas or relic shrines, the chakra or wheel, the emblem of Dharma, of Devi, or Sri, who became the Lakshmi of the following Hindu religion. The trisul emblem and the sacred feet are shown, and there are sieges represented, and fighting and triumphs, and others portray-

ing men and women drinking and love-making. At Sanchi, most of the women are figured nude, while at Bharhut no figure is entirely nude. The southern and oldest of the gateways of the tope at Sanchi was almost certainly erected during the reign of the first of the Andhra kings, in the first quarter of the 1st century; and the other three topes were erected in the course of that century. The last of the architectural monuments of this dynasty was the completion of the rail at Amaravati, about A.D. 450.

The Sanchi tope numbered 2 by General Cunningham contains the relics of the ten apostles who took part in the third convocation under Asoka, and afterward aided in the spread of Buddhism on the borders of India. No. 10 tope has the relics of Sariputra and Moggilana.

At Sanchi, love-scenes and drinking-scenes are represented, and at Muttra the female figures are nude. Each of the pillars found by General Cunningham when excavating at Muttra is adorned by the figures of naked women in high relief, well executed, richly adorned with necklaces and bangles, and a bead belt or girdle round their middles. Each stands on a crouching dwarf; and above each, in a separate compartment, are the busts of a male and female figure, either making violent love or drinking.

The Bharhut tope has numerous bas-reliefs, all representing some scene or legend, and nearly all inscribed with the names of the principal persons represented, with the title of the Jataka or legend.

About 100 topes have been found at Jalalabad, Manikyala, and in the region from the Indus to Kābul. Manikyala is situated near Jhelum, on the banks of the river of that name, called by the Greeks the Hydaspes. There are many topes there, one of which is 80 feet high, with a circumference of 320 feet. No coin of a Greek prince of Bactria has ever been met with in any of these topes. No coins have been found in any Indian topes; but in all the Afghanistan topes coins are found deposited with the relics. The topes have been examined by Dr. Honigberger (1835), Mr. Masson, Generals Ventura, Court (1833-34), and Cunningham, and were described by Professor Wilson in his Ariana Antiqua. The topes at Jalalabad differ from those of India in being smaller in size, taller in proportion to their breadth, and having a far more tower-like appearance, except the Sarnath example. The largest, at Darunta, is only 160 feet in circumference. This is the usual size of the first-class Afghan topes, the second-class being a little more than 100 feet, and many are much smaller.

These topes or tumuli, it is now admitted, are only cairns regularly built, and this mode of sepulture is supposed to be alluded to in the heaps, and graves, and tombs spoken of in Job xxi. 32, also xxx. 24, and in Jeremiah xxxi. 21; and cairns are still found scattered over all the northern parts of Europe and Asia, and down to Cape Cormorin in Peninsular India. Amongst others, the tumuli of Halyattes, Croesus, etc., have never been properly excavated, and would probably yield most interesting archæological treasures, and perhaps pay for the work if attempted. Mr. Dennis, English consul, Smyrna, began to excavate the tumulus of Croesus, but was obliged to stop short of the work. Chiefs of Nakello, in Fiji, were interred in tumuli. The tumuli over the Assam (Ahom) sovereigns are very extensive, and when opened, the remains have been found in massive timber coffins, with gold and silver ornaments, and, outside the coffin, various arms, utensils, and implements of agriculture. The same practice prevailed extensively in America, particularly in Peru. —*Ouseley's Travels*, ii. p. 112; *Cunningham's Bhilsa Topes; Fergusson, Rock-cut Temples; Masson.*

TOPI. HIND. A hat, a skull-cap. In India these are made of many materials and in varied shapes. Topi-jhalladar, a cap with a tassel, jhalla. Topi-wala, literally hat-fellow, a derogatory term employed by natives of India to designate Europeans.

TOP-KHANCHE, a border village on the Grand Trunk road. Chass was, on the old route viâ Hazaribagh, the village where Bengal and Behar on each other gaze, and where the traveller has to pass on from one to the other province. Hence the popular saying of the Hindustanis—

'Jab koi pār hojātā Chāss
Tab chhorta nahi ghār ki ās.'

TOR. PUSHTU. Black. The Tor or Black Tarin, a tribe occupying Pishin; Spin or White Tarin, a Pathan tribe residing in the valley of Zawura, and in the open plains of Tull and Chutiali.—*Latham.*

TORA. HIND. A metal anklet ring of gold or silver. A plain ankle ring or chain-work for the ankle, with or without a fringe.

TORAH. HIND. A number of trays, containing various dishes of food, presented to others by great men, or the dishes set before guests at meals.

TORAMA. Amongst the Tartars, a dish of horseflesh boiled soft, and mixed up with turnips, carrots, and dumplings.

TORAN or Torana. SANSK.
Pailoo, ... CHIN. | Tori, Torii, . . . JAP.

A capital, an arch, an ornamental arch, a festoon; strings of flowers stretched across roads; also the gateway of the Buddhist and Hindu temples; also the doorway of the relic or memorial topes or st'hupas, usually in the form of an ornamented archway, but some are formed of upright pillars held together by cross-beams of stone. The most beautiful of these are at Bijanagar, Futtehpur, Sikri, Gaur, Jaunpore, and Sanchi. The Torii of Japan, literally bird-nests, are the sacred gateways of the temples of the Shin-to sect, and consist of two upright posts and a transverse beam. They are the portal over the entrance of the avenues leading to temples and shrines. The Toran in Rajputana is a symbol of marriage, and consists of three wooden bars, forming an equilateral triangle, having the apex crowned with the effigies of the peacock; it is placed over the portal of the bride's abode. At Udaipur, when the princes of Jeysulmir, Bikanir, and Kishengarh simultaneously married the two daughters and the granddaughter of the rana, the torans were suspended from the battlements of the tripolia, or three-arched portal leading to the palace. The bridegroom on horseback, lance in hand, proceeds to break the toran, toran-torna, which is defended by the damsels of the bride, who from the parapet assail him with missiles of various kinds, especially with a crimson powder made from the flowers of the palasa, at the same time singing songs fitted to the occasion, replete with double entendres. At length the toran is broken, amidst the shouts of the retainers, when the fair defenders retire. The similitude of these ceremonies to others in the north of Europe

and in Asia, increases the list of com-affinities, and indicates the violence of rude times to obtain the object of affection; and the lance, with which the Rajput chieftain breaks the toran, has the same emblematic import as the spear which, at the marriage of the nobles in Sweden, was a necessary implement in the furniture of the marriage chamber. We discover in this emblem the origin of the triumphal arches of antiquity, with many other rites which may be traced to the Indo-Scythic races of Asia. The Rajput's toran, in its original form, consisted of two columns and an architrave, constituting the number three, sacred to Hari, the god of war. In the progress of the arts, the architrave gave way to the Hindu arch, which consisted of two or more ribs without the keystone, the apex being the perpendicular junction of the archivaults; nor is the arc of the toran semicircular, or any segment of a circle, but with that graceful curvature which stamps with originality one of the arches of the Normans, who may have brought it from their ancient seats on the Oxus, whence it may also have been carried within the Indus. The cromlech, or trilithic altar, in the centre of all those monuments, called Druidic, is most probably a toran sacred to the sun-god Belenus, like Har or Bal Siva, the god of battle, to whom, as soon as a temple is raised, the toran is erected, and many of these are exquisitely beautiful.—*Northern Antiquities; Tod's Rajasthan*, i. p. 271.

TORCH TREE or Torchwood. In India, Ixora parviflora, *Vahl.*; in Ceylon, a straight dried branch of the Pterospermum suberifolium is used for a torch; it is bruised into loose strips, and it burns freely and steadily. The Sarcocaulon, remarkable in its fleshy stem and spinose leaf-stalks, burns freely like a torch.

TORENIA ASIATICA. *L.* Caela dola, SANSK. A plant found in almost every part of India; is described by Rheede as having the juice of its leaves employed as a cure for gonorrhœa on the coast of Malabar. It has a brilliant purple flower.

Torenia cordifolia, *Roxb.*, Kaka pu, MALEAL., an annual spreading plant; grows on the coasts of Southern India, and is used in medicine.—*O'Sh.*; *Eng. Cyc.*

TORI. HIND. A vegetable. Bhinda tori, Abelmoschus esculentus; Galar tori, Trichosanthes anguina; Ghia tori, Luffa pentandra; Kali tori, Luffa acutangula.

TORIKA are Japanese officers of noble blood, commanding troops, under the orders of the governors, whom they assist with their advice, and carry out their orders. The doosiu are assistants to the Torika, serve as guards, do duty on board ship and in guard boats. Each of the doosiu is required to maintain a servant. The karoo are stewards. The bugio are civil officers, of rank of two swords, who exercise a controlling power over collectors, interpreters, and other inferior officers.

TORPEDINIDÆ, the torpedo family of fishes, belonging to the order Plagiostomi, and the sub-order Rajinæ. Several genera and species occur in Indian waters, viz.:—

Torpedo marmorata, *Risso*, Indian Ocean, Cape, Mediterranean.
T. panthera, *Rüpell.*, Red Sea.
T. Smithii, *Gthr.*, South Africa.
T. fusco-maculata, *Peters*, East Africa.
T. occidentalis, *Storer.*
T. sinus Persici, *Kæmpfer*, Persian Gulf.
Narcine Tasmaniensis, *Rich.*, Australia.
N. timlei, *Henle.*, East Indies, Japan.
N. lingula, *Rich.*, China.
Hypnos subnigrum, *Dum.*, Australia.
Astrape Capensis, *Gm.*, Cape, Madagascar.
A. dipterygia, *Bl., Schn.*, Indian Seas, China, Japan.
Temera Hardwickii, *Gray*, East Indies, Penang.

Narcine Indica, Astrape dipterygia, Temera Hardwickii, and Cysteodercus temeræ occur in the Malay seas. Dr. Cantor says large individuals of Narcine are of rare occurrence at Penang, but younger, from 3 to 6 inches in length, are taken at all seasons, and in or out of water they may be handled with impunity. Several species of fishes introduced into a jar filled with sea-water, and containing a large Narcine, showed no consequences from the contact, nor did they appear to avoid the torpedo. The food of this and the other Malayan Torpedinidæ consists of crustacea and testacea. Torpedo, the name of the principal genus, was founded by Dumeril upon the Raia torpedo of Linnæus, and some other species. The space between the head, the pectoral fins, and the branchiæ, is occupied by small vertical hexagonal tubes, which are filled with mucous matter, and largely provided with nerves from the eighth pair. The situation of these honeycomb-like cells, which constitute the electrical apparatus, is indicated on the upper surface by a slight convexity on each side of the head.

Risso described Torpedo narke, T. unimaculata, T. marmorata, and T. Galvani.

TORRENS, HENRY, a Bengal civilian who was Secretary to the Government of India from 1838 to 1845. He died August 1852. He translated the Arabian Nights, Calcutta 1839; wrote an Abstract of Traffic across the N.W. Frontier, in Bl. As. Trans., 1841, x. p. 677, Edin. Phil. Jl., 1841; on Native Impressions on the Natural History of Animals, in Bl. As. Trans., 1849, xviii. 778.

TORRES ISLANDS. The Great Torres Islands are the most western of the Mergui Archipelago, consist of two contiguous islands with some small islets near them, the centre of the western island being in lat. 11° 47′ N., and long. 97° 28′ E. The Little Torres Islands are a group of three or four small straggling isles 9 miles south by east of Great Torres.

TORREYA GRANDIS. *Fortune.* A tree of China attaining a height of about 60 feet, with an umbrella-shaped crown; it produces good timber. T. nucifera, *Sieb. and Zucc.*, the Caryotaxus nucifera, *Zuccarini*, a tree of Japan, height about 30 feet. The nuts yield an oil which is used for food.—*Von Mueller.*

TORRIANO, MAJOR, took the fort of Honore by storm on the 6th January 1783. From the 14th May he defended it against an army of 10,000 men, until the peace of 1784, when, having been reduced to eat rats and cats, on the 18th April he delivered it up, and left for Bombay with a remnant of 238 men, having lost 505 by death and desertion.

TORS. By the natural weathering of rocks exposed to atmospheric vicissitudes, the perishable parts are removed, and the more resisting portions remain. In rocks which manifest peculiar arrangements of joints or natural divisions, the blocks and masses defined by their intersections often appear in cubical, sub-columnar, and other characteristic shapes. To masses more or less characteristic in figure, left by the decay of surrounding parts in

prominent situations, the name of Tor is applied in the granitic tracts of Devon and Cornwall. Tors are of very frequent occurrence in the granitic rocks of Southern India, where, as in Hyderabad in the Dekhan, and in the Ceded Districts, the piled-up masses often are seen assuming the appearances of artificial structures.—*Newbold.*

TORTOISE. In Southern and Eastern Asia, there are about 50 species of land and fresh-water tortoises and turtles, and the more important may be thus shown :—

Sec. A. Cataphracta, Shielded Reptiles.

ORDER, CHELONIA.

Fam. Testudinidæ.

Testudo Indica, *Gmel.*, Galapagos.
T. radiata, *Shaw*, Madagascar.
T. stellata, *Shaw*, Vizagapatam.
T. platynotus, *Blyth*, Bardwan.
T. elongata, *Blyth*, Arakan, Tenasserim.
Homopus Horsfieldii, *Gray*, Afghanistan.

Fam. Geoemydidæ.

Manouria emys, *Gray*, Tenasserim.
Geoemyda grandis, *Gray*, Tenasserim.
G. tricarinata, *Blyth*, Chaibassa.
Cuora Amboinensis, *Daud*, Malacca, Tenasserim.
Cyclemis orbiculata, *Bell*, Burma.

Fam. Emydidæ.

Emys nuchalis, *Blyth*, Java.
E. Hamiltonii, *Gray*, Calcutta.
E. trijuga, *Schweigg*, Arakan, Madras.
E. nigra, *Blyth*, Tenasserim.
E. sobæ.
Tetraonyx Lessonii, *D. and B.*, Calcutta, Tenasserim.
Batagur lineatus, *Gray*, S. E. India.
B. Thurgii, *Gray*, Calcutta.
B. dhongoka, *Gray*, Central India.
B. Berdmorei, *Blyth*, Pegu.
B. ocellata, *Dum.*, Calcutta.
B. trivittata, *Dum.*, Nival.
Pangshura tectum, *Bell*, Calcutta.
P. tentoria, *Gray*, Indus.
P. flaviventer, *Gunth.*, Bengal.
P. Smith, *Gunth.*, Bengal.
Platysternum megacephalum, *Gray*, Martaban.

Fam. Trionycidæ.

Emyda granosa, *Gray*, Calcutta.
E. Ceylonensis, *Gray*, Ceylon.
Trionyx Gangeticus, *C. and V.*, Bengal.
T. Guntherii, *Gray*, Arakan.
Chitra Indica, *Gray*, Hoogly.

Fam. Chelonidæ.

Sphargis coriacea, *Linn.*, Tenasserim coast.
Caretta imbricata, *Schweigg*, Bay of Bengal.
Cayana olivacea, *Eschech*, Bay of Bengal.
Chelonia virgata, *Schweigg*, Bay of Bengal.

Testudo greca inhabits a part of Syria; the T. geometrica, an African species, is found also in the island of Ceylon. Of Trionyx, several species inhabit the rivers of Southern Asia. One has been observed in the Euphrates, which is perhaps identical with the Trionyx of the Nile, also found in Hindustan. The Ganges maintains the T. Gangeticus, peculiar, so far as is known, to that river; another, the T. granosus, which forms the passage to the Emydes, is found also on the coast of Coromandel; while two others, T. stellatus and T. subplanus, have been observed from Bengal to the island of Java. The Trionyx of Japan belongs most probably to the first of these, which would thus be nearly as widely diffused as the Emys vulgaris, of which a local variety is found in the islands of that empire. The other Emydes of the south-eastern portion of Asia are E. tectum, E. megacephala, so characteristic in its heavy or unwieldy form; E. tetrionyx, intermediate between the Emydes and Trionyx, and a native of the river Irawadi; E. Spengleri varieties are known in the isle of France, Ceylon, Penang, Malacca, Sumatra, Java, Borneo, and China; E. couro inhabits China, the southern point of Celebes, and the islands of Penang, Java, and Amboyna; while E. trijuga has been found in Java.

Tortoises are eaten in the Pacific Islands. A small fresh-water tortoise of China, called Luh-mau-kwei, is provided with a growth of green conferval filaments of an inch or more in length. It is kept in bowls and fed on fish and shrimps.

The tortoise is sacred in the eyes of the Buddhists of China, because it is believed to undergo no transformation.

The kites carry to a height the small fresh-water tortoise Emyda punctata of Central India, and drop it so as to break the shell.

Testudo elephantina, the gigantic land tortoise of Aldabra, found only in Aldabra, a small island in the Indian Ocean, N.W. of Madagascar; is now nearly extinct. One specimen, a male, weighed 870 lbs., and although known to have been more than 80 years old, was still growing at the time of its death. Other tortoises of great size occur in the Seychelles Islands. The colossal tortoise, Colossochelys atlas, discovered in the Siwalik tract, is extinct. Ancient mythological conception represents the world as supported on the back of an elephant, itself sustained upon a tortoise. This ancient wide-spread notion (common to the ancient Pythagoreans and the modern Hindus) had in it, before Falconer, an obvious incongruity, in that the greatest land animal of the world was figured as supported on the back of an animal of a size comparatively insignificant. His discovery of the Colossochelys, however, removed this incongruity. For in the very same formations in which it was discovered, relics were also found, identical with the existing Emys tecta; on this ground, Dr Falconer conjectured that human eyes might have witnessed the Chelonian monster alive, and watched its toilsome march. This association together of fossil animals and man as contemporaries was indeed remarkable, as it took place at a time so long anterior to that in which the antiquity of man began to receive attention from men of science generally.—*Siebold, Fau. Jap. Chelonii, per C. J. Temminck and H. Schlegel, in Magazine of Zoology and Botany*, i. 199; *Gunther, Reptiles; Smith, M. M. C.*

TORTOISE-SHELL.

Ecaille de tortue, . FR.
Schilpad, ... GER.
Kachakra, GUJ., HIND.
Scaglia de tartaruga, IT.
Sisk, Kurakura, MALAY.
Sisik panu, . . . ,,
Kulit-panu, . . . ,,

The scales of the turtle are extensively used in the manufacture of combs, snuff-boxes, in inlaying, etc. The goodness of tortoise-shell depends mainly on the thickness and size of the scales, and partly on the clearness and brilliancy of the colours. The tortoise-shell of the Eastern Archipelago is considered superior to that obtained from Singapore, the African coast, the West Indies, the Laccadive and Maldive Islands. In Ceylon, at Point de Galle, the marginal pieces of tortoise-shell are used in the manufacture of bracelets and necklaces formed of a chain of shell; those resembling amber in appearance bear a higher price than such as are formed of the darker shell. In Ceylon there is a great demand for tortoise-shell

for the manufacture of combs, which are worn by men as well as women among the Singhalese. In the numerous excesses into which English costume has been carried, the size of the back comb worn by ladies has never attained that of the Singhalese men, who also wear a narrow, long bent comb across the fore part of the head. Five pounds is a moderate price for a tortoise-shell back comb, which increases in value according to the size and quality of the shell. Hair-pins of tortoise-shell are worn by the Ceylon women, gold and silver being substituted for full-dress; these hair-pins are among the articles purchased by passengers in the steamboats. Tortoise-shell, termed Sisik panu, literally tortoise scales, is the only part of the turtles held of much value by the natives of the Indian islands. Turtle are found in all the seas of the Malay and Philippine Archipelagos, but the imbricated kind that yields the finest shell is most abundant in those of Celebes and the Spice Islands, as far as the coast of New Guinea. The parties chiefly engaged in their capture are the Baju, maritime hunters of the Archipelago, of whom the turtle is the principal game. These people distinguish four species of sea-turtles, to which they give the names of kulitan, akung, ratu, and boko. The last is the panu of the Malays, and the green esculent turtle, of which the carapace is of no use, the animal being valued only for its flesh to sell to the Chinese and Europeans, for among the Muhammadans it is unlawful food. The three first-named species all yield a marketable shell. The ratu, which signifies king or royal turtle, is said to be of great size, measuring from five to six feet in length, but is not often taken, and the shell is of inferior value. All the finest shell is afforded by the first, the kulitan, the name, in fact, signifying shell-turtle, and is from the karet, Caretta imbricata, the hawk's-bill turtle. The back of this creature is covered with 13 shields or blades, which lie regularly on each other in the manner of scales, five on the middle of the back and four on the sides; these are the plates which furnish the costly tortoise-shell to art. The edge of the scale or of the back is further covered with 25 thin pieces joined to each other, which in commerce are known under the appellation of feet or noses of the tortoise. The value of the tortoise-shell depends on the weight and quality of each head, under which expression is understood the collective tortoise-shell belonging to one and the same animal. Tortoise-shells which have white and black spots that touch each other, and are as much as possible similar on both sides of the blade, are, in the eyes of the Chinese, much finer, and are on that account more greedily monopolized by them, than those which want this peculiarity, and are, on the contrary, reddish, more damasked than spotted, possess little white, or whose colours, according to their taste, are badly distributed. The caprice of the Chinese makes them sometimes value single heads at unheard-of prices, namely, such as pass under the name of white heads, which they also distinguish by peculiar names. Such heads as, possessing the above-named qualities, are very white on the blades, and have the outer rim of each blade to the breadth of two or three fingers wholly white, and the weight of which amounts to 2½ catties (qualities which are seldom found united), may be valued at one thousand guilders and upwards = £24 per lb. avoirdupois. The feet or noses of the tortoise-shell are only destined for the Chinese market; whenever the two hinder pieces are sound and have the weight of a quarter catty or thereabouts, which is very seldom the case, they may reach the value of fifty guilders and more. The whole shell of a turtle seldom weighs more than three catties, notwithstanding it is asserted that there sometimes occur heads of four and five catties. Tortoise-shells are also sometimes found, of which the shell, instead of thirteen blades, consists of a single undivided blade; the Orang Baju call this kind, which very seldom occurs, lojong or loyong.

The akung also furnishes tortoise-shell (karet), but the shell being thin, and of a poor quality, much less value is attached to it.

The boko, called panju by the Malays, is the common sea-turtle, which is of no other use than to be eaten. To these sorts the panjubui ought to be added, being the common turtle, with a thick shell, like that of the proper turtle, but of poor quality, and therefore of trifling value; so also the akung-boko, which is distinguished from the common boko by its much larger head.

The ratu, lastly, furnishes a sort which is distinguished by its peculiarly great size, the Orang Baju asserting that it is usually twice as big as the largest tortoise-shell turtle, and therefore five to six feet long and even more.

The Baju catch the turtle by the hadung, the harpoon, and the net; or by falling upon the females when they resort to the strand to lay their eggs, which is almost the only way by which the inhabitants of the coast catch this animal. So soon as they have got the creature in their power, they turn it on its back, when it is unable to recover itself. It sometimes also enters the fishing-stakes.

When the Baju catch a turtle, they kill it immediately by blows upon the head. The tortoise-shell adheres so fast to the shield, that, if they at once pulled it off, there would be danger of tearing the shells, and they usually wait three days, during which time the soft parts become decomposed, and the shells are loosened with little trouble. When they wish to remove the shell immediately after the capture, they separate it by means of boiling water. This object can be accomplished by the heat of a fire, in the application of which, however, a danger is run of injuring the shell by burning it. The Indian islands furnish the largest supply of tortoise-shell for the European and Chinese markets, the chief emporia being Singapore, Manilla, and Batavia, from which are exported yearly about 26,000 lbs.; and one-half of this quantity is from Singapore. Mr. Morrison tells us that the best tortoise-shell comes to China from the Spice Islands and New Guinea. The green turtle average 350 lbs. each, and the hawk's-bills about 250 lbs. Although a strong prejudice existed against the hawk's-bill as an article of food, it is at least equal to the other. He saw newly-hatched turtle running about in every direction, and among their numerous enemies was a burrowing crab (Ocypoda cursor), which runs with great swiftness along the sandy beaches. The price varies from 1000 dollars down to 200 per pikul, according to quality.—

M'Gillivray, Voyage, i. 51; *M.E.J.R.; Morrison, Comp. Des.; Crawfurd; Journ. Ind. Archi.*, 1839.

TORTOSA, the ancient seaport of Mount Libanus, is opposite the island of Aradus, the modern Raad. It was from this Tortosa that the wood of Lebanon was conveyed to Phœnicia, whence, for ship-building, it was carried on camels' backs to the Red Sea, and it is this town which the translators of the Hebrew Scriptures have rendered Tarsus.—*Rob.* ii. p. 70; *Catafago.*

TORTURE is perhaps practised in India, unlawfully, more particularly the various modes of compressing and binding the limbs and chest, and burning and branding. The latter practice still lingers throughout the Bengal Presidency, and prints of the chillum and hata are by no means rare. In Afghanistan is a form called squeezing of the head. A leathern strap, made to fit the head and the ends sewn together, has two sticks fixed to its interior sides. It is placed on the head so as to have both sticks facing the temples, after which the executioner begins twisting the strap; the sticks pressing on the temples produce an intense suffering. Another kind of torture is to hammer under the nails thorns and splits of reed. The Dandazani, practised at Benares, consisted in fastening a man's arms behind his back with a cord, which is twisted round by a stick. In Sundrazani, the victim was struck with a double flapper of thick leather. In the Awangilli, the victim had to stand erect with a foot on each of two round pots, so far apart as to render it difficult to retain that portion.—*Calcutta Review*, January 1871; *Elliot.*

TORUD GOPA. HIND. A dye-stuff, said to be prepared from the dung of cows which have been fed on 'keshu,' the flowers of the Butea frondosa. Used in ophthalmia, and to make the 'tika' on the forehead.—*Powell.*

TOSHA. HIND. Double felt of Amritsar; a mattress, a quilt. Tosha-khana, a wardrobe of royalty, a storeroom.

TOTA-KAHANI. HIND. A book containing the tales of a parrot; it is called in the Persian Tutinamah. Its original, the Suka Saptati, seventy tales, is in Sanskrit.—*Dowson.*

TOTANUS CALIDRIS, common redshank of Europe, Asia; very common in India. T. fuscus, the spotted redshank of Europe, Asia; common in India. T. glottis, the greenshank of Europe, Asia, Africa, Australia; stragglers obtained in N. America; very common in India.

TOTARA, the most valuable timber tree of New Zealand is the Podocarpus totara.

TOTEM. An early stage in religious progress is that which may be called totemism, or the worship of natural objects. The savage does not abandon his belief in fetishism, from which, indeed, no race of men has yet entirely freed itself, but he superinduces on it a belief in beings of a higher and less material nature. In this stage everything may be worshipped,—trees, stones, rivers, mountains, the heavenly bodies, plants, and animals. A family, for instance, which was called after the bear, would come to look on that animal first with interest, then with respect, and at length with a sort of awe. The habit of calling children after some animal or plant or gem, is very common. In China the name is frequently that of a flower, animal, or such like thing. In India, amongst the slave girls of the Muhammadan harems, the nargas, the sosan, the narcissus, the lily, etc., are in common use as names. In Australia, the totem, or, as it is there called, kobong, is almost in the very moment of deification. Each family, says Sir G. Grey, adopts some animal or vegetable as their crest, or sign, or kobong as they call it; but it is more likely that these have been named after the families, than that the families have been named after them. A certain mysterious connection exists between the family and its kobong, so that a member of the family will never kill an animal of the species to which his kobong belongs should he find it asleep; indeed, he always kills it reluctantly, and never without affording it a chance of escape. This arises from the family belief that some one individual of the species is their nearest friend, to kill whom would be a great crime, and to be carefully avoided. Similarly, a native of Australia who has a vegetable for his kobong, may not gather it under certain circumstances, and at a particular period of the year. Here we see a certain feeling for the kobong or totem, though it does not amount to worship. In America, on the other hand, it has developed into a veritable religion. The clan name of a Rajput race, Sesodia, is from the hare. So also among the Khonds of India, the different tribes take their designation from various animals, as the bear tribe, owl tribe, deer tribe, etc. The Kol of Nagpur also are divided into 'keeli' or clans, generally after animals, which, in consequence, they do not eat. Thus the eel, hawk, and heron tribes abstain respectively from the flesh of these animals.—*Lubbock, Origin of Civil.* p. 173.

TOTTI, of the Tamil people, is a village servant who waits upon the villagers. The domestic Totti does the humblest part of the house work.

TOTTYAR, a race of Coimbatore, who settled there from the north.

TOU. In the midst of a Tartar camp is a standard formed of a long pike, to which are attached seven white yaks' tails, one above another. These standards are called tou by the Chinese; and doubtless it is from them that the name of the Turkish standard, the 'toug,' has been derived. 'It is,' says Cuvier, 'with the tail of the yak, a native of the mountains of Tibet, that those standards were first made which are still in use among the Turks.'—*Regne, Animal*, i. p. 270; *Huc's Christianity*, i. p. 121.

TOUBA TREE, ANGLO-ARAB., of the Muhammadans, a fabulous tree which is mentioned in the Koran.

TOUNGHOO, properly Toung-ngu, a town of the Tenasserim Province of British Burma, in lat. 19° N., and long. 90° 18′ E. It is built on the right bank of the Sitang river, is a military cantonment, and is the headquarters of a district to which it gives its name, lying between lat. 17° 37′ and 19° 28′ N., and between long. 95° 58′ and 96° 53′ E. Area, 6354 square miles; population in 1872, 86,166 souls. The district is crossed by the Pegu Yomas, and the Poung-loung and Nattoung chains, covered for the most part with dense forest.

According to the palm-leaf histories, A-thawka (Asoka) in B.C. 321 sent for the chiefs of Toung-ngu, and, giving them various relics of Gautama, directed them to transport them to Toung-ngu, and to erect pagodas over them.

Philip de Brito y Nicote seized this country in the name of the king of Portugal, and entered into an alliance with Maha-thi-ha-thu-ra-dhamma-raza, but he quarrelled with Nat-sheng-noung-thi-ri-maha-dhamma-raza, and captured Toung-ngu. Pegu was eventually conquered by the king of Burma in 1612, and Toung-ngu never regained its independence.

The population consists of Talaing, Arakanese, Khyeng, Ya-baing. The principal manufactures are silk, saltpetre, and gunpowder. The Ya-baings and Karens rear silk-worms.

TOUNG-THA, children of the hills, of Burma, speak numerous dialects, and worship the deities of the elements, and spirits of the hills and streams.

TOUNG-THU, a tribe occupying the valley of Salwin, from lat. 18° to 20° N. The Toung-thu dwell between the Sitang and the Salwin, and in Amherst Province, and are in their dialect more closely connected with the Yuma languages than with the Burman. The Toung-thu has a large glossarial agreement with Karen, but it has special affinities with the Kumi and other Yuma dialects, and particularly with the Khyeng. The Toung-thu are Islamized Chinese, and are said to resemble the Annamese, but as their dress resembles that of the Annamese, this may create deception. Those who occupy a portion of Amherst Province are the only people there who understand the plough. This has a metal blade. They are esteemed good cultivators.

TOUNG-YA. Burm. A form of hill cultivation carried on by burning the jungles. The Toung-ya of Burma and Arakan is the Dhai-ya of the Central Provinces, the Joom of the hill tracts of Chittagong, and Kumari of S. India.

TOUR, Cytisus cajan.

Togari, ...	Can.	Tur-dhal, ...	Hind.
Pigeon-pea, . . .	Eng.	Tovaray, purpoo, .	Tam.
Large dhal, . . .	,,	Kandi papu, . . .	Tel.

This is sown in fields at the commencement of the rains in June, and sometimes much later; it is ripe in December. The seeds are sometimes ground into flour, or split like dry peas; for the latter they are an excellent substitute. It is partly sown along with ragi, like bullur, and partly in full in dry lands.

TOURMALINE has many valuable and beautiful forms, amongst them the rubellite of Ava and Siberia. Tourmaline and rubellite are boro-silicates of several bases. Tourmaline is a corruption of the Ceylon name. It varies very much in transparency. On account of its property of polarizing light, it is used largely in the manufacture of polarizing instruments. *Yellow tourmaline* from Ceylon is but little inferior to the real topaz, and is often sold for that gem.

White tourmaline of an inferior quality is often offered for sale in Moulmein under the name of Ceylon diamonds, but they are usually made from green tourmaline by exposing it to heat.

Red tourmaline or *rubellite* occurs in Ceylon, Burma, and Siberia. It is a fine stone, and of great value when free from cracks and flaws. The finest have all the richness of colour and lustre belonging to the ruby.

Yellowish-grey and *hyacinth-brown* varieties are chiefly brought from Ceylon.

Schorl or black tourmaline is found in Madura in great abundance, also in quartz near the mouth of Tavoy river on the east side, and also at the foot of the eastern mountains near the head-waters of the Dahgyaine, north-east of Moulmein. In both places the crystals are numerous, and in Tavoy they are large.

Green tourmaline, when clear and fine, is valuable for gems, and specimens which cannot be distinguished by the eye from beryl are brought with the Ceylon diamonds. Beryl scratches quartz, but tourmaline is scratched by quartz.—*Mason; Dana, Mineralogy; Bristow, Mineralogy.*

TOUS-LES-MOIS, Canna edulis, *Ker*. Starch from the tubers is commonly used by invalids. The microscopic granules of Tous-les-mois are larger than those of any other starch used as food.

TOWER OF SILENCE is a designation of the elevated structure raised by the Parsees, on which are lodged the remains of their dead. In Bombay, on the N.E. crest of Malabar Hill, are situated two towers of silence. From the Gowalia Tank Road towards the north, a winding avenue leads to the gateway at the top, on which is an inscription that none but Parsees may enter there. The gateway is also reached by a sort of giant staircase, half a mile long, which, starting from the Gaundavi Road, close to Back Bay, comes almost straight up the hill. The grand staircase is shaded by palms and other trees, and it is the route along which the dead are borne. The visitor on passing the portal is in a kind of small court-yard, from which he can only advance by mounting some half-dozen steps. On the right is the Suggree, a low stone building open on all sides, in which prayers are offered for the dead. When the mourners are numerous, they group themselves round the building, see all that goes on within, and take part in the prayers. The dead are never taken within the Suggree. Beyond the garden, on the undulating summit of the hill, looking towards Malabar Point, is the park-like grass-covered tract in which, at irregular intervals, are the towers of silence, where the dead are laid. The towers, of which there are six, are round, and on an average from thirty to forty feet high, and about as much in diameter; one or two are, perhaps, higher. They are built of stone, the walls being some three feet thick, and they are all coloured white. There is no window, and only one door, covering a small aperture about a third of the way up. To this aperture access is obtained by a narrow stone causeway, up which the bier-bearers of the dead alone may venture; no one, except the bearers who are set apart for the purpose, approaches within thirty paces of them. Inside, on the lock pavement, spaces are marked out on which the dead are placed to await the vultures, and pathways are marked out for the bearers to walk upon without defiling the place where their unconscious burdens are to rest.

When a Parsee dies, his body is at once washed and purified, and if there be time, it is carried to the towers before sun-down. If death take place, however, after, say, three o'clock, when there would not be time to gain the towers and pray becomingly before dark, the body is kept till the early morning. Having been rendered undefiled, it is clothed in white, and prayers are offered at the house by the family and friends. None may henceforth touch it. The women of the family take a last look, and the light bier on which it has been placed being covered with a white shroud, it is carried by the bearers to the hill. No vehicle

can on any account be used; no one must even follow in a vehicle; the whole journey, no matter what the distance, must be made on foot. All who form part of the cortege must have been washed and clothed in white, and to touch any one would be to become defiled. The women in some cases wear mourning—black, but the men never. No woman attends a funeral; the female relatives of the dead always remain at home on that day, but they may and do go afterwards to the garden near the towers to pray.

Carrying the body and following it in procession, holding scarfs passed from one to the other, those forming the cortege wend their way slowly to the foot of the steps leading to the top of Malabar Hill; ascending these, they reach the crest in a quarter of an hour, and the priests go through the sacred ceremonies in the Suggree. When the prayers are over, the body is borne to the foot of the causeway leading to the door of one of the towers. Here the face is uncovered so that all may take a last lingering look; it is covered again, and the form disappears into the tower.

The towers are scattered over a large and park-like enclosure, secluded by its elevation from every eye. Outside the lofty wall which encircles the whole space, there are hundreds of acres of land, partially cultivated, which the Parsees claim, and which, while in their possession, they have carefully kept as a sort of neutral territory between the domain of outsiders' bungalows and that of the towers. What goes on inside, therefore, no one can see; but what happens is this. Some fifty vultures make their abode in the lofty palms within the enclosure; seldom indeed do they go beyond the trees in the rough ground outside the vast compound. There is nothing of a sacred character ascribed to these useful but unclean birds. They are regarded simply as creatures who remove the dead, and the grounds about the towers of silence have nothing of the hideous taint of the charnel-house. A magnificent view bursts upon him who stands on the Suggree steps and looks across the island and the bay beyond. The white walls of innumerable bungalows and public buildings are seen through a forest of palm trees, over the tops of which you see, in the middle distance, the great sea, which is the harbour. Beyond rise Elephanta and other mountain islands; towards the south is the fort, with its public buildings glistening in the sun; while Back Bay with Colaba beyond make up another and only a less beautiful picture.

TOWQ. ARAB. A collar or ring, worn round the neck. See Togha.

TOWYAH. SIND. A grain measure of quantity, ranging from 3¾ lbs. to nearly 7½ lbs. for different grains.

TOXOTES JACULATOR. *Pallas.* The food of several examined, consisted of remains of crustacea. In the Straits of Malacca this fish occurs, but not numerously, at all seasons. It is eaten by the Malays, who record its habits in the denomination ikan, signifying a fish, sumpitan, a blow-pipe.

TOY CART, a Sanskrit play, the Mrichikata, by Kalidasa, translated by Professor Wilson. This play is supposed to have been written by king Sudraka; over what kingdom he reigned is not ascertained with certainty. Professor Wilson remarks in his introduction to the Toy Cart, p. 9, that it may be safely attributed to the period when the sovereign Sudraka reigned, whether that be reduced to the end of the 2d century after Christ, or whether we admit the tradition chronologically, and place him about a century of our era. These specimens of the Hindu drama show how little is the change in the customs of the Hindus since the plays were written.

TOYS.

Spilgoed, ...	DUT.	Mayinan, . . .	MALAY.
Jouets, Bimbelots, .	FR.	Timangan, . . .	,,
Spielzeng, . . .	GER.	Shai-i-bazi, . . .	PERS.
Spielsachen, . . .	,,	Igrushki, ...	RUS.
Rumakra, . . .	GUJ.	Dijes, ...	SP.
Khel, Khelowni,	HIND.	Juguetes de minnos,	,,
Trastulli, ...	IT.	Bommigal, . . .	TAM.
Parmayinan, . .	MALAY.	Bommalu, . . .	TEL.

Playthings for children to amuse themselves.

TRACHILOBIUM HORNEMANNIANUM is the copal tree of Zanzibar. The gum copal or gum anime from it is found in the earth on the east coast of Africa, and often where no copal-yielding trees now exist. Specimens of the leaf, flower, etc., obtained from the semi-fossil gum, agree in all respects with those of the living tree. The peculiar and more valuable properties of the buried gum anime are supposed to be from a chemical action, the result of a long retention in the earth.

Copal, called gum anime in the London market, occurs on the E. coast of Africa from Panjan to Mboamaji, and an endless supply is obtainable. The whole of the Zanzibar coast produces the real copal of commerce. Raw or jackass copal is exported in considerable quantities from Zanzibar. The ripe or true copal is valued by its colour. The clearest and most transparent pieces bring the highest prices, after them the light amber, lemon and dark-yellow, and red. Sometimes the gum, like amber, contains drops of water, bees, ties, flies, and other insects. The diggers do not excavate to the depth of a man's waist, and the copal occurs in a red sand underlying blue clay. The Tr. Hornemanniauum tree yields now a second-class gum-resin, but the same tree did yield the anime resin which has been buried for thousands of years under the soil, and there been changed. In many cases a change in the level of the land seems to have taken place since the old trees yielding the Sanifariol anime died, for copal is often found in the ground where the tree is now lost or rare.—*Dr. Kirk; Capt. Burton.* See Resins.

TRADES and Tradesmen. Amongst the races in the East Indies many are keen traders, engaging in extensive transactions with distant countries. The Bhattiah, Natha-Kothi, Marwari, and Banya Hindus, the Parsees, the Povinda, Bora, Moplah, and Labbai Muhammadans, the Bugis of the Archipelago, are not surpassed in enterprise by the mercantile men of any race. The trade of the Arabian Sea, Red Sea, the Persian Gulf, the east coast of Africa, and of the Eastern Archipelago has been in the hands of the races of Southern and Eastern Asia from the times that the Buddhist religion prevailed, and the Marwari race, who are of the Jain sect, still pursue it; and it is a proof of the tenacity with which races follow mercantile pursuits, to find the Marwari from the desert of India spread throughout the

country as its great financiers, with transactions in all parts of Asia.

The Bhattiah Hindu race occupy all the great commercial centres from the north of Rajputana to the western coast of India, and to the shores of Arabia and of Africa, as far south as Mozambique, residing there for years together, or as temporary visitors during the trading season. They belong to a Vaishnava sect who follow the teaching of Vallabhacharya. Amongst them are to be found the keenest of traders, and yet the most sensual of voluptuaries; intellects remarkable even among Hindus for acuteness and subtlety; sometimes an obtuseness of moral consciousness which would startle a galley-slave, but in rare exceptions a simple devotion to truth which would do honour to a Christian martyr. Hindu merchants, tradesmen, and artisans of India are mostly all associated in classes, sects, castes, or guilds, who do not intermarry, and seldom eat with others. The blacksmith, goldsmith, coppersmith, carpenter, and stone-cutter are the five artisan castes, komsala or kansala, in contradistinction to the five learned castes. The artisan castes all wear the poitu or sacrificial cord; they do not revere Brahmans, and they carry their dead to the grave and inter them in a sitting posture; the leather-workers' dead are deemed unclean.

Such social customs of the Hindu traders, however, are peculiarities of their respective guilds, and in no way affect their business habits or occupation in their intercourse with the, to them, outer world. For over two thousand years the people who have been dwelling on the coasts of the Arabian Sea, sometimes at one town, sometimes at another, have been actively engaged in commerce with the nations of Western Asia and Europe, and when disturbed by conquering races at one place, they have found shelter at another. The British have only been in India since the 17th century, but in that time three great cities, which had absolutely no previous nucleus, have grown up around their fortresses.

In 1881 Bombay had a population of 773,196; Madras, 405,848; and Calcutta and its suburbs, 684,658. Kurachee, in the year 1840 a small fishing-place, has now 73,560 inhabitants; and in the thirty years from 1852, Rangoon has grown from 25,000 to its present (1881) population of 134,176. India, with a population in British territory and in Native States of 253,891,821 souls, has 3,057,522 mercantile men, general dealers, carriers by land and sea, or engaged in storage; and in Bombay, Calcutta, and Rangoon will be found the representatives of every civilised race on the surface of the globe, all earnestly engaged in trade. That they are largely immigrants is shown by the fact that British Burma, in a population of 3,736,771, has 245,239 more men than women.

The closing years of the 15th century saw Portuguese ships rounding the Cape of Good Hope, and a century later companies began to be formed by European nations for trade with the East.

The Portuguese trade was a royal monopoly. An English E. I. Company was formed in 1600, and a Dutch Company in 1602. There have been six French companies,—1604, 1611, 1615; Richelieu's in 1642, Colbert's in 1644, and Company of the Indies in 1719. A Danish E. I. Company was formed in 1612, and another in 1670; a Scottish Company in 1695, Spain's Philippine Company in 1733, Austria's Ostend Company from 1723 to 1784, and a Swedish Company, 13th June 1731. But it is since 1833, when steamboats began to run in Indian seas, and since Count de Lesseps completed the Suez Canal in 1868, that its commerce has received its chief development, and its foreign trade in the past forty-three years has grown as under:—

	1830-40.	1881-82.
Imports.		
Cotton twist, yarn, and manufactures,	£2,660,000	£23,990,000
Other articles,	3,170,000	25,120,000
Treasure,	1,950,000	11,320,000
Total,	£7,780,000	£60,430,000
Exports.		
Raw cotton,	£1,920,000	£14,940,000
Opium,	1,210,000	12,430,000
Grain of all sorts,	670,000	17,510,000
Other articles,	8,800,000	37,080,000
Treasure,	570,000	1,100,000
Total,	£13,170,000	£83,060,000

China, the other great eastern country with which European and American nations have been trading, has only in recent years been communicating information as to its external trade; and it may be of use to mention here, for future observation, that in the eleven years 1872 to 1882, the values of its imports have been ranging as under, in Haikwan taels, viz.:—

1872,	70,222,000	1876,	72,391,000
1874,	67,241,000	1879,	84,796,000
1881,	93,884,000		
1882,	79,715,000		

Coal, in 1882,	253,099 tons.	1,220,000	H.T.
Cotton, raw,	178,478 pikuls.	1,917,000	,,
Cotton manufactures,		22,707,000	,,
Ginseng,	4,731 ,,	763,000	,,
Metals,		4,700,000	,,
Opium,		26,746,000	,,
Malwa,	65,709 ,,	13,090,000	,,
Patna,	20,335 ,,	5,958,000	,,
Benares,	15,379 ,,	5,499,000	,,
Others,	15,017 ,,	5,499,000	,,
Sea-weed or agar-agar,	5,977 ,,	2,300,000	,,
Wool manufactures,	400,106 ,,	1,344,000	,,
		4,496,000	,,

TRADESCANTIA AXILLARIS. *Willde.*

Nir pulli, . . . CAN. | Gola gandi, . . . TEL.
Baga nella, . . . HIND. |

A native of moist pasture ground, used medicinally. The Tradescantia genus belongs to the Commelynacæ, or spider-wort tribe, natives of America and India; twelve species occur in the East Indies.

Tradescantia discolor, *L'Her*, Rhæo discolor, *Hance*, is known as the oyster plant, as its inflorescence is enclosed in two bracts resembling a bivalve shell.—*Roxb.* ii. p. 118.

TRADE-WINDS blow continuously from one direction, and are so called because of the facilities which they afford to trade by sea. They differ from monsoons, which blow one-half of the year from one direction and the other half from an opposite or nearly opposite direction. There are two trade-winds, the north-east on the north of the equator, and the south-east to the south. Like all winds, these are put in motion by the heat of the sun, and are directed by the daily rotation of the earth. The belt or zone of the S.E. trades is broader than that of the N.E. trades. Its current even crosses the equator, and invades the belt of the N.E. trades, and discharges itself into the region of equatorial calms. Ships sailing on the ocean calculate on meeting the trade-wnds

and monsoons in certain parallels of latitude, and sail for weeks with their ropes and sails unaltered. When the N.E. and S.E. trades meet, the equatorial calms are produced, in which constant rain prevails; it is the condensed vapour of the ocean. Trade-winds, in the Pacific Ocean, blow from the N.E. between lat. 9° and 27° N., and from the S.E. between lat. 3° and 25° S. But there is on the polar side of the north-east trade-winds an immense area of arid plains for the heat of the solar ray to beat down upon, also an area of immense precipitation. These two sources of heat hold back the north-east trade-winds, as it were, and when the two are united, as they are in India, they are sufficient not only to hold back the north-east trade-wind, but to reverse it, causing the south-west monsoon to blow for half the year instead of the north-east trade.

The south-east trade-wind seldom blows beyond lat. 10° S. between October and March. In the other months its influence is felt more to the north, but seldom up to the equator, and then so much altered in character that it may be said the zone between 10° S. and the equator is the region of œculian winds and calms. While the sun is south of the equator in January, February, and March, the space does not lie on a parallel, but occupies a diagonal belt from Sumatra to the Mauritius. In April, the winds, as a rule, are very light over all the Indian Ocean, northward of 10° S. This is the period when the great change of season occurs, and the many currents are each striving for mastery.

The Mauritius lies in the S.E. trade-winds, and there the influence of the sun during the day is to double the velocity of the wind, and to impress upon it a more truly easterly direction.

In the trade-wind regions at sea, evaporation is generally in excess of precipitation, while in the extra-tropical regions the reverse is the case, that is, the clouds let down more water there than the winds take up again; and these are the regions in which the Gulf Stream enters the Atlantic. Along the shores of India, where experiments have been carefully made, the evaporation from the sea amounts to three-fourths of an inch daily. The effect of diurnal rotation upon the currents of the sea is admitted by all—the trade-winds derive their easting from it; it must therefore extend to all the matter which these currents bear with them, to the largest iceberg as well as to the merest spire of grass that floats upon the waters, or the minutest organism that the most powerful microscope can detect among the impalpable particles of sea-dust. Investigations show that in the Atlantic Ocean the south-east trade-wind region is much larger than the north-east, that the south-east trades are the fresher, and that they often push themselves up to 10° or 50° of north latitude; whereas the north-east trade-wind seldom gets south of the equator. The peculiar clouds of the trade-winds are formed between the upper and lower currents of air. The zone of the north-east trades extends on an average from about 29° to 7° N. And if we examine the globe, to see how much of this zone is land and how much water, we shall find, commencing with China, and coming over Asia, the broad part of Africa, and so on, across the continent of America to the Pacific, land enough to fill up, as nearly as may be, just one-third of it.—*Maury's Physical Geography.*

TRAFALGAR, a word of Arabic derivation, from Tarf-el-Gharb, the side or skirt of the west, it being the most occidental point then reached by Arab conquest.—*Burton's Mecca*, i. p. 9.

TRAGA. Hind. A self-immolation practised by Bards and Charans, the self-shedding of blood to enforce demands. There has long prevailed in India a practice of hiring a person of a religious class, generally of the Bard or Bhat tribe, to threaten to injure himself unless redress were given. The person so hired threatened to kill or wound himself, or some other person, unless the demand he made were complied with. It has been put down by law. But the practice of traga, or inflicting self-wounds, suicide, and the murder of relations, formed a strong feature of the manners of the people of Rajputana. The practice was common in Kattyawar to the Bhat and Charan of both sexes, and to Brahmans and Gosain, and has its rise in religious superstition; and although tragas seldom wore a very formidable aspect, still they were sometimes more criminal, by the sacrifice of a greater number of victims. The traga ceremony borders much upon the Brahman practice of dharna, but is more detestable. The Charan, besides becoming security for money on all occasions, and to the amount of many lakhs of rupees, also become what is called fa'il zamin, or security for good behaviour, and hazir zamin, or security for the appearance.

Under the equal rule of the British, the practice has seldom been resorted to in their territories. A late instance, however, occurred on the 22d July 1861, at Nuriad, in the Bombay Presidency, on the occasion of the civil power proceeding to levy an income-tax. The Bhat and Charan claimed exemption from all taxation, and their threats being disregarded, they and their women cut and stabbed themselves in their faces, arms, and chests with their katars or daggers; several lost their lives. In 1806, a Bhat named Kunna, of Veweingaon, became security in a large amount to the Gaekwar's Government for Dasajee, the chief of Mallia; to enforce it, the traga of their child was made. A Charan is said to have slain his own mother to deter a chieftain appropriating land belonging to the Charan. Captain M'Murdo says that in 1844 traga was largely used in the country between the Indus and Gujerat.

Shahghassi Nur Muhammad was married to the daughter of Dhai Bibir, who was living when the British forces captured Kalat in 1839; when the town was entered, he put her and his other wives to the sword.—*Masson's Journey*, ii. p. 94; *Colburn's United Service Magazine*, 1861. See Sacrifice.

TRAGACANTH, Gum tragacanth.

Samagh-ul-aswad,	Arab.	Kattira, .	Guj., Hind.
Samagh-ul-katira, .	,,	Tragacantha, . . .	Lat.
Gommi astraganti, .	Fr.	Kurn, ...	Pers.
Traganth, ...	Ger.	Vadomocottaypisini,	Tam.
τραγακανθα, . . .	Gr.	Badam vittu banka,	Tel.

The gum tragacanth of commerce is a product of several plants. Tournefort adduced as its source Astragalus creticus of Lamarck, a native of Mount Ida in Crete. Labillardiere describes A. gummifer, a native of Mount Libanus in Syria. Olivier names A. verus, inhabiting Asia Minor, Armenia, and Northern

Persia. In Crete and surrounding islands, this gum is gathered about the end of June from the A. tragacantha. Arab authors describe it by the name kasira or katira, for which, in the north-west and in the Peninsula of India, a katira is substituted, produced by Cochlospermum gossypium, and another in Pegu, according to M'Clelland, by several species of Sterculia. Dr. E. Dickson, when in Kurdistan, collected plants which he ascertained to yield a tragacanth. Dr. Lindley determined that the white or best variety is yielded by A. gummifer, and the red or inferior kind by his A. strobiliferus. Gum tragacanth is largely employed in calico-printing, and it has many uses in the arts and in pharmacy. The finest kind occurs in twisted, vermicular, rounded, or elongated pieces, almost transparent, whitish, brittle, inodorous, with a slightly bitter taste. It is also found in large tears, of a vermicular form, a reddish colour, and mixed with impurities. The vermiform is the variety usually brought to England, while the latter is commonly employed on the continent.—*M'Cul.; Royle; M'Cl.; O'Shaugh.; Ainslie; Waterstone; Faulkner.*

TRAGIA CANNABINA. *Linn.*

Kanchkuri,	Dukh.	Sirru canchuri,	Tam.
Casaghinnie,	Sansk.	Chinna dula-gondi,	Tel.
Kurunduti,	Tag.	Revati dula-gondi,	,,

This plant, belonging to the order Euphorbiaceæ, occurs throughout British India. Its hair stings like that of the common nettle. The dried root has but little taste or smell, though with an agreeable odour when fresh. It is considered as diaphoretic and alterative, and is prescribed in decoction, together with other articles of the same class. An infusion of it is also given in fever.—*Ains.; Roxb.*

TRAGIA INVOLUCRATA. *Linn.*

Bich'huti,	Beng.	Shorigenam,	Maleal.
Bot-ya?	Burm.	Dustparisha,	Sansk.
Canchorie,	Hind.	Dula-gondi,	Tel.

The hairs sting violently; the roots are given by the Hindu Baid, Vytia, and Vaida herbalists as an alterative for correcting the habit in cases of constitutional cachexia, and in old venereal affections attended with anomalous symptoms. Rheede, speaking of the root, says, 'Conducit in febre ossium, ac servit pro pruritu corporis.' He further adds, 'In decocto data, urinam suppressam movet.'—*Ains.; O'Sh.*

TRAGOPOGON GRACILIS, a plant of the Himalaya mountains; its leaves are eaten like lettuce.

Tragopogon porrifolius, *Linn.*

T. sativus, *Gat.*		Salsify,	Eng.

A plant of the order Matricariaceæ, an excellent vegetable, cultivated for its white roots, which are mild and sweet flavoured; requires culture similar to carrots; held in high estimation by the French. The young shoots are sometimes used as asparagus, which in flavour they resemble. It is raised from seed.—*Jaffrey.*

TRAGOPON, a genus of birds of the family Phasianidæ. T. duvaucelli, *Tem.*, now referred to Pucrasia macrolopha, *Lesson*, the purkhas pheasant of the Himalayas, and T. Hastingii, *Vigors*, is a synonym of Ceriornis melanocephala, *Gray*, the horned monal or Argus pheasant of the Himalayas.—*Jerdon.*

TRAGOPS BENNETTII.

Antilope quadricornis, *Blainville.*

Ravine deer,	Eng.	Chikara,	Hind.
Goat antelope,	,,	Kala-sipi,	Mahr.

The Kala-sipi, or black-tail, so called by the Mahrattas on account of the deep black colour of the tail, is of a bay-brown colour, and has the end of the nose and tail black; the face streaked; chest, belly, and inside of limbs white; the feet are black or brown. It is found on the rocky hills of the Dekhan, and, according to the report of Colonel Sykes, differs from many other antelopes in not being gregarious, there being rarely more than three or four found together in the same company, and not unfrequently a solitary individual.—*Eng. Cyc.* p. 241.

TRAGOSITA MAURITIANA, a beetle from the Mauritius, largely distributed through means of the sugar bags.

TRAI BIDOK and Trai Phum are Buddhist books of Siam. According to the Buddhistic doctrine, matter is eternal; the existence of a world, its duration, destruction, and reproduction, all the various combinations and modifications to which matter is liable, are the immediate result of the action of eternal and self-existing laws. The Trai Phum is much venerated in Siam. It is not an original work, received among the immense collection of canonical Buddhist books called Trai Bidok (in Burman, Bedegat), but a compilation made in the Buddhist era 2026, A.D. 1784, when the king of Siam, in the presence of his nobles and retinue, proposed a series of questions to the chief hierarch, priests, and learned men, of which they were able to answer some, but some they could not answer.—*Rev. J. T. Jones in Jour. Ind. Arch.* v.

TRANQUEBAR or Tarangambadi, a seaport town in the Tanjore district of Madras, in lat. 11° 1′ 37″ N., and long. 79° 53′ 44″ E. In 1612, a Danish E. I. Company was formed at Copenhagen, and in 1616 their first ship arrived in India. It is said that the captain, Rodant Crape, to effect a landing, wrecked his ship off Tranquebar. He contrived to reach the raja of Tanjore, from whom he obtained land 5 miles long and 3 broad. Tranquebar was taken by the British in 1807, with other Danish settlements in India, but restored in 1814. It was bought by the British from Denmark in 1845, at the same time as Serampur, for a sum of £20,000. Tranquebar was the first settlement of Protestant missionaries in India; was founded by Ziegenbalg and Plutschau (Lutherans) in 1706. The best known of Ziegenbalg's successors was Schwartz (ob. 1798). Six per cent. of the inhabitants are Labbai Muhammadans.—*Imp. Gaz.*

TRANS, a Latin word in use amongst geographers of Europe to indicate a country on the further side of rivers or mountains, as Trans-Indus, Trans-Himalaya. Cis, another Latin word, is used to indicate the countries or region on the nearer side, as Cis-Himalaya, Cis-Indus.

TRANSIT DUTIES, or Sair, were in India exacted by every native chief, and were continued in part by the British Government, but were finally abolished in Lower Bengal in 1836; in the N.W. Provinces, between 1834 and 1836; in the Bombay Presidency, in 1837; in Madras, in 1844; and in other parts on their subsequent acquisition. Several of the native princes followed the

example. The net revenue abandoned in Madras was £310,000 annually.

TRANSMIGRATION of the soul is believed in by all Buddhists and all Hindus. The Egyptians maintained that, after death, the immortal soul migrated into the bodies of birds, beasts, or fishes, and other animals, and that the gods took refuge in the bodies of animals, from the wickedness and violence of men. Pythagoras, and after him Empedokles, adopted these doctrines, and, according to Heraclides, Pythagoras used to say of himself that he remembered not only what men, but what plants and animals, he had passed through. Pythagoras also said he remembered that he had inhabited four bodies, and it is he to whom Virgil alludes in the lines—

'Ipse nam nemini, Trojani tempore belli,
Penthoides, Euphorbus, eram.'

Empedokles likewise declared of himself that he had been first a boy, then a girl, then a plant, a bird, and fish.

The Greeks and Celts worshipped Apollo under the title of Carneios, which, according to Theocritus, is derived from Carnos, who, having prophesied the misfortunes to the Heraclides in their inroads on the Peloponnesus, one of them, called Hippotes, slew him. One of the titles of Krishna, the Hindu Apollo, is Carna, 'the radiant,' from Carna, a ray; and when he led the remains of the Hericula in company with Baldeva (the god of strength) and Yudishtra, after the great international war, into the Peloponnesus of Saurashtra, they were attacked by the aboriginal Bhil, one of whom slew the divine Carna with an arrow. The Bhil claim to be Hyvansa, or of the race of Hya, whose chief seat was at Maheswar on the Nerbadda. The assassin of Carna would consequently be Hyputa, or descendant of Hya. As Krishna lay dying, he bid the Bhil not to be distressed, as he (Krishna) had slain the Bhil in a former birth.

The Bards of the martial Rajput races say that there are two distinct places of reward, the one essentially spiritual, the other of a material nature. The Bard inculcates that the warrior who falls in battle in the fulfilment of his duty, 'who abandons life through the wave of steel,' will know no 'second birth,' but that the unconfined spark (jote) will 'reunite to the parent orb.'

The doctrine of transmigration through a variety of hideous forms, may be considered as a series of purgatories. The aim of a Hindu's life is to make sure that it be the last of him. For it is virtual, if not defined and acknowledged, annihilation that the Hindu strives after; it is the destruction of consciousness, of individuality, of all the attributes and circumstances which make up what we call life.

In Buddhism, one of the established laws is the belief in metempsychosis, or the migration of the souls of animated beings.

The traditions of the Buddhists of the present day claim for Sakya, the Buddha, a recollection of 510 migrations.

In the Tibetan Buddhist creed, the doctrine of transmigration is shown, and final absorption into Buddha is put forward as the reward of a virtuous life. There has been some misapprehension regarding the Buddhas and Bodhisatwas, the regeneration of the Grand Lama being considered as an exceptional case of a Buddha returning amongst mankind. Mr. Hodgson truly calls the divine Lamas of Tibet Arhanta, but he believes that a very gross superstition has wrested the just notion of the character to its own use, and so created the 'immortal mortals, or present palpable divinities of Tibet.' In the Nouv. Jour. Asiat. xiv. p. 408, ii., Fra Orazio says that 'Lama sempre sara coll' istessa anima del medesime Ciangc'iub, oppure in altri corpi.' Remusat was not aware of this fact when he stated 'les Lamas du Tibet se considerent eux-memes comme autant de divinités (Bouddhas) incarnées pour le salut des homes.' But the explanation which Major Cunningham received in Ladakh, which is the same as that obtained by Fra Orazio in Lhassa, is simple and convincing. The Grand Lama is only a regenerated Bodhisatwa, who refrains from accepting Buddhahood that he may continue to be born again and again for the benefit of mankind. For a Buddha cannot possibly be regenerated, and hence the famous epithet of Sathagatha, 'thus gone,' and Sugata, 'well gone,' or gone for ever.

Tibetans believe in six forms in which a living being may be re-born, viz. Lha, TIB., Deva, SANSK., spirits or gods; Mi, or men; Lha Mayin, or evil spirits; Dudo or Johsong, brutes, beasts; Yidaga, imaginary monsters; and as the inmates of Nyalba or hell, or Naraka. All Hindus believe in the transmigration of souls. The fact of transmigration none of their systems dispute; it is allowed by all; as a man casts off his old garments, and puts on new ones, so that soul having left its old 'mortal frame, enters into another which is new.' This is based on the philosophic belief that the soul has a separate existence. There are, however, various opinions.—*Oriental Linguistic Studies; Hodgson; Sonnerat's Voyage; Cunningham, Bhilsa Topes; Elphinstone's India; Bunsen's Egypt; Tod's Rajasthan; Tennent's Christianity.*

TRANSOXIANA, literally beyond the Oxus, is the Mawar-un-Nahr of the ancient Arab writers. It consists of the northern half of the tract of country vaguely known as Central Asia, is chiefly a plain country extending from those eastern chains of hills, which, as the extreme spurs of the Tian-Shan, reach nearly to Samarcand, and sink with a rapid declension down to the shores of the Caspian Sea. With the exception of a few table-lands, and some bits of hard clay or loam, —called by the inhabitants Takin or dry, barren country,—the soil consists chiefly of black or yellow sand, and the only land really fit for cultivation is that lying on the slopes of the hills or on the banks of rivers and canals. In spite of this, the fertility of Bokhara and of the two other khanates has passed into a proverb, for their products are both excellent and various, and owe their source to the Zar-afshan river.—*Vambery's Bokhara*, p. 31.

TRAP, in geology, is a term applied to older volcanic rocks which have flowed over or between other rocks, assuming the form of stairs (Trappa, Sw., a stair), and distinguished as eruptive trap, overlying trap, interposed trap, and trap-dykes. Trap, in its mineralogical structure, is of augite, hornblende, or basalt. The greatest outburst of trap in the world is that which was first described by Colonel Sykes as the trap formation of the Dekhan. It extends from Nemuch, in lat. 24° 27' N., to the banks of the Kistna, over an area of 250,000 square miles.

In Central India, volcanic trap-rocks are observed

to spread east and west from Nemuch in the form of basalt, basaltic greenstone, greenstone, and greenstone amygdaloid, and southwards by Ujjain and Saugor across the Vindhya, assuming the structure of columnar basalt in the steep descent to the Nerbadda. Crossing this river, the trap is seen to spread over all the Aurangabad province down through Kandesh and the Konkan to Bombay, and southwards to Malwan, in lat. 60° N., its southern limits being observed south of Punderpur, through Bijapur to the right bank of the Kistna, in the valleys near Homnabad, where it is found beneath, but never penetrating the laterite hills south and east of Beder, and at Maharajapetta, 30 miles west of Hyderabad. The eastern edge of this vast tract of trap-rocks, after crossing the Nerbadda to the south, skirts the town of Nagpur in Berar, passes Nandeir, and to the westward of the city of Hyderabad to its southern limit, just mentioned. South of this, as well as to the eastward, the trap only appears as great dykes, from fifty to a hundred yards broad, which run east and west parallel with each other. These dykes can at places be traced for 150 miles, bursting through the granite and other rocks, tearing the highest of the hills asunder, and filling the chasms and crevices with its dark and compact structure. In these dykes the elements of the trap-rock assume a variety of appearances,—greenstone, porphyritic greenstone, basaltic greenstone, hornblende rock, and basalt. They are particularly numerous in Hyderabad, the Balaghat, Ceded Districts, Carnatic, and Mysore, almost to the southern cape of the Peninsula, and, with very rare exceptions, run due east and west.—*Colonel Sykes; Carter's Geology; Barometrical Sections.*

TRAPA, a genus of plants belonging to the sub-order Trapeæ (Hydrocaryes, *Link.*), the water-nut tribe of plants. There are 5 species in Europe, Siberia, East Indies, and China. In some parts of India, great care is taken to preserve the seed for planting the following season, which is done by treading it into the beds of tanks and such places. The fruit is fit to be taken at or about the close of the rains. In China, the kernel is used as an article of food, being roasted or boiled like the potato. Mr. Fortune saw three distinct species or varieties, one of which has fruit of a beautiful red colour. Loureiro mentions T. Cochin-Chinensis, Siebold describes T. incisa, and Roxburgh T. quadrispinosa, from Sylhet.—*Fortune; Royle; Jaffrey; O'Sh.*

TRAPA BICORNIS, *Roxb.*, Ling-koh, Ling, Link, CHIN., grows abundantly in the lakes and ponds of Hu-peh, in China. It is distinguished from T. bispinosa by its two horns being recurved and very obtuse. In China, the fruits of Trapa bicornis are much sought after as food.—*Roxb.*

TRAPA BISPINOSA. *Linn.*

Singhara, .	BENG., HIND.	Gaunri, ...	PANJ.
Ling, ...	CHIN.	Seringata, . .	SANSK.
Two-spined water caltrops,	ENG.	Parike gadda, . .	TEL.
		Pandi gadda, . .	,,
Pani-phal, . . .	HIND.	Kubjakam, . . .	,,
Karim-polam,	MALEAL.	Sringa takamu, .	,,

This grows in both Peninsulas of India, in Bengal, Peshawur, Kashmir, the Panjab up to 5000 feet, in Nepal and China. Its flowers are small, white, flowering in May and June, fruiting in the cold season. Its fruit is sold in the bazar and eaten by the natives, and in China, the Panjab, Kashmir, and Gujerat it forms an important article of food. During the Holi festival, its flour is mixed with a dye procured from the flowers of Butea frondosa. The fruit in flavour resembles a chesnut, is eaten both raw and cooked, especially by the Hindus of N.W. India, as it is phalahar, *i.e.* may be eaten in their fasts. It abounds so much in starch, that it may be easily separated from the seeds. In Kashmir, miles of the lakes and marshes, etc., are covered with this plant. Moorcroft states that in his time in the valley it furnished almost the only food of at least 30,000 people for five months of the year, and that from the Wular lake, ninety-six to one hundred thousand ass-loads were taken annually, the Government drawing 90,000 rupees duty on it, and maharaja Ranjit Singh got more than a lakh of rupees from this plant. In the N.W. Provinces, the cultivation of the species is extensively carried on by the Dhimar castes, who are everywhere fishermen and palanquin-bearers, who keep boats for planting, weeding, and tending this water crop. The holdings of each cultivator are marked out in the tank by bamboos, and they pay so much an acre for the portion they till. The rent paid for an ordinary tank is about Rs. 100 a year, but Rs. 200 or 300 are paid for a large tank. But the plants cause such an increase of mud, that a tank is quickly spoiled by them, and the cultivation is not allowed where the tank is required as a water reservoir. When the tanks become dry in May or June, the nuts or bulbs are gathered into a small hole in the deepest part of the tank, and when the rains commence each shoot is broken off, wrapped in a ball of clay, and thrown into the water at different distances. They at once take root and grow rapidly, and cover the surface of the water with their leaves; their fruit ripens in October. The yield of a standard bigha is 2½ man = 205 lbs. 15 oz., which sell at 10 seers the rupee. The deeper the water the better the crop. Green singhara sells at one maund of 24 seers per rupee, and dry at 18 seers per rupee. Singhara flour sells at 8 and 10 seers per rupee. The produce of one seer of seed in a good season is about 20 maunds. The water-nut is as regularly planted and cultivated under a large surface of water, as fields of wheat or barley on the dry plains. The long stalks of the plants reach up to the surface of the water, upon which float their green leaves; and their pure white flowers expand beautifully among them in the latter part of the afternoon. The nut grows under the water after the flowers decay, and is of a triangular shape, and covered with a tough brown integument adhering strongly to the kernel, which is white, esculent, and of a fine cartilaginous texture. The nuts are carried often upon bullocks' backs two or three hundred miles to market. They ripen in the latter end of the rains, or in September; and are eatable till the end of November.—*Roxburgh; Voigt; Sleeman's Indian Official*, i. p. 102; *Powell; Stewart.*

TRAPA NATANS. Fau-ling, CHIN. This European species grows also in China. It is remarkable for its fruit with four spines, being of a blackish colour and large size; its seed is good to eat, whether raw, roasted, or in soups, and is somewhat like a chesnut in taste. It was known to the Romans by the name Tribulus. Pliny says (lib. xxi. c. 58), 'About the rivers Nilus and

Strymon, the inhabitants gather it for their meat.'—*Eng. Cyc.*; *Fortune*; *Honigberger*.

TRAPA QUADRISPINOSA. *Roxb.* This plant is grown in Sylhet, and its fruit is like that of T. bispinosa, *Roxb.* T. tricornis is the Ki-shih of the Chinese.

TRAP TREE, a species of Artocarpus which furnishes the gutta used as birdlime. The fibre of the bark is used at Singapore for fishing-lines, cordage, and nets.—*Royle*.

TRAP-TUFFA. A variety of this rock, sometimes white, sometimes greenish or purple, found in Bombay and many other parts of India, resembles laterite in the quality of being easily cut when raised, afterwards hardening on exposure to the air. It is used as a building-stone, and suits well for basins, troughs, and aqueducts; it is not very extensively employed.

TRAVANCORE, a principality in the extreme S.W. part of the Peninsula of India, ruled by a maharaja of the Kshatriya race. At the close of the 17th and commencement of the 18th century, the present territory was under several petty chiefships called Etadda Pulleymar, the capital of one of which was Tiruvancod, between Udiagherri and Anjengo. The present race of ruling sovereigns claim descent from Cheraman Perumal, who was reigning in the south about A.D. 352. During the 16th and 17th centuries they continued steadily to suppress the smaller states, the last of which were swept away by Wanji Perumal, who reigned from 1729 for 30 years.

No authentic history of Travancore in early times is extant; but tradition states that the whole Malayalam coast was reclaimed from the sea by Parasurama, and colonized by certain Brahmans, known as Namburi, whose rule, after lasting for a considerable time, terminated in B.C. 68. The Brahmans then elected Kshatriya chiefs to rule for periods of twelve years. This system of electing a new ruler every twelve years lasted for four centuries. The last and greatest of these rulers, Cheraman Perumal (Viceroy of Chera kings), at his death divided his dominions among his vassals.

Travancore is also called Veynad, also Tirupapur Swarupam; the eastern coast people call it Kerala, also Malealam; and it is also called Kurma Bhumi, in contradistinction to the east coast, which is styled Jnana Bhumi, also Punnea Bhumi. The uterine brothers of the maharaja are designated princes by the British, with the honorific prefix of Highness. There are ten titular designations in that kingdom, all hereditary; they are suffixed to the names of the persons holding them. The revenue in 1877–78 amounted to Rs. 55,26,199, of which the land revenue furnished Rs. 16,32,012, and the customs Rs. 12,26,661. The tenures by which lands are held are Janm, Madambimar, and Sirkar. The Janm is a hereditary freehold, but lapses on sale to the Government. The Madambimar are freehold, but held at raja bogum or sovereign's pleasure.

Travancore was overcome by Tipu in December 1798, but he withdrew from it on learning the approach of Lord Cornwallis to Seringapatam. From that time until 1808 there were internal dissentions, but in that year a war broke out against the British, which was suppressed, and in 1811 the Resident, Colonel Munro, assumed the duties of a Dewan, until 1814.

There are several seaport towns, but Anjengo and Tanguncherry belong to the British. The Perriar is the finest river in all the western coast. It is navigable for small craft for sixty miles, but during the dry season its mouth is closed. There is a succession of marine lagoons connected by navigable canals extending for 200 miles along the Travancore, Cochin, and British coast, from Chowghat to Trevandrum, and to connect these, after the middle of the 19th century, the Travancore State began to cut through a promontory 6 miles in breadth.

It is a fertile, well-watered country. The raja resides at Trevandrum. The main chain of mountains runs southward for 150 miles to Cape Comorin, with occasional deep depressions, and terminates in a bold, precipitous mass 3000 to 4000 feet high, within three miles of the cape itself. They are loftiest at the extreme north of the district, where they stretch east and west for sixty to seventy miles, separating the districts of Dindigul and Madura, and rising into peaks of 8000 to 9000 feet, which overhang the plain of Coimbatore, and they retain an elevation of 5000 to 6000 feet throughout their extent to the southward. The southernmost peak of note is the sacred Agasteshwara Malai, the source of the Tambraparni river. At the head of the Travancore Hills stands Anaimudi (8837 feet), the highest peak south of the Himalayas, and near it are several other peaks of 8000 feet. South of this group is the lower region of the cardamom hills; even south of this, although the hills become lower and narrower, the country is thinly inhabited almost to Cape Comorin. Here, on the Paralai and Kodai, there are anicuts constructed by Pandiyan kings. There are eighty-two distinct castes in the State, including subdivisions, and Brahmans amount to about one-fiftieth part of the whole population, the Sudras forming nearly one-third of it. The agricultural class amount to about three-fourths of the entire population. 83 per cent. of the population speak Malayalam, 17 per cent. Tamil.

Travancore shares with Malabar the Marumakkatayam law of descent, and its many peculiar customs, social and religious. Among the Namburi Brahmans the eldest son alone marries and inherits; the other children have no claim to the family estate or a share of its produce. Their girls remain unmarried to any age, and even die unmarried. Nair girls are all married formally when children; but when they grow up they may choose men either of their own or the Brahman caste, and live with them, and the titular husband has no claim. The succession among the Nairs, as in Malabar, follows the line of sisters, and children by the sisters. A man without a sister is without a legal heir, and must adopt a sister to perpetuate the family. The succession to the throne of Travancore is governed by the same law, though the maharaja claims to be a Kshatriya. The children of a Nair are therefore heirs to their maternal uncle, performing the religious rites at his decease, and succeeding to his estate. The Namburi and Nair are very cleanly, and bathe several times daily. The Brahmans burn their dead, but the Nairs bury or burn their dead, according to the custom and means of each family. The burning or burial in all cases takes place in some corner of their own gardens. The tuft of hair, which among the people on the east coast is worn

on the back of the head, is here worn on the crown, and allowed to hang forward. There is the utmost liberty of conscience, and many immigrants. The native Christian population consists of 63 per cent. Syrians, part Roman Catholics of the Syrian rite, and the rest Nestorians; Roman Catholics of the Latin rite, 24 per cent.; the remainder Protestants. The large Christian population is a distinctive feature of the country. The Syrian Christians date from the earliest centuries of our era; the Roman Catholics of the Latin rite are the result of the European missions of the Jesuits and Carmelites during the last 300 years.—*Imp. Gaz.*

TRAVELLER'S TREE of Madagascar, Ravenala Madagascariensis, *Sonnerat.* Its leaves are about 15 feet long.

TREBECK, GEORGE, a companion of Moorcroft, died at Muzar, a town of 500 houses within the limits of the khanate of Balkh. He left a favourable impression amongst the people of the countries through which he passed. Moorcroft set off on his journey at the end of 1819.—*Moorcroft's Tr.* i. p. 24.

TREBIZOND is said to have been founded B.C. 707 by a colony from Sinope, the capital of Pontus. It derived its wealth from the munificence of the emperor Adrian. It was taken and pillaged in the first expedition of the Goths from the Ukraine in the reign of Valerian. Trebizond dates are the fruit of Elæagnus orientalis, *L. f.*, used in Persia as dessert.—*Vigne*, i. p. 6.

TREE.

Shajr,	Arab.	J'hara,	Guj.
Nakl,	Beng.	J'har,	Hind.
Murut	of Borneo.	Puhn,	Malay.
Guas, Idaan	of ,,	Mara,	Maleal.
Keioh, Kayau	of ,,	Darakht,	Pers.
Pokoh, Malay	of ,,	Vrukchum,	Sansk.
Basoh, Milanau	of ,,	Gass, Gaha,	Singh.
Bin,	Burm.	Maram, Cherri,	Tam.
Tung,	Chin.	Chettu, Manu,	Tel.

Age.—The ancient cypress tree of Soma in Lombardy is said to have been full grown in the time of Julius Cæsar. The oak of Ellerslie, the conqueror's oak in Windsor forest, and the cedars of Lebanon, the baobabs of Senegal, the dragon tree of Orotava, the Wellingtonia of California, and the chesnut of Mount Etna, have all been famed. The Wellingtonia rises 300 feet high, has a girth of 30 feet, and one of them was estimated to be 6000 years old.

An 'if' at Fortingall in Scotland is said to be 3000 years old. A tree at Foullebec on the Eure, in France, when measured in 1829, appeared to be 1100 or 1200 years old. The yew trees of Fountain Abbey are believed to be 1200 years old. The olives in the garden of Gethsemane were full grown when the Arabs were expelled from Jerusalem. Rashid-ud-Din, writing A.D. 1310, mentions the existence of a tree at the confluence of the Jumna and the Ganges, which is still there, enclosed by part of the fortifications. The planting of the Bo Tree in Ceylon, a ceremony coeval with and typical of the introduction there of Buddhism, is one of the most striking passages in the Mahawanso; and a tree of unusual dimensions, which occupies the centre of a sacred enclosure at Anaradapura, is still reverenced as the identical one which the sacred books record to have been planted by Mehinda 307 years before the Christian era, consequently in the year 1900 it will be 2207 years old. So sedulously is it preserved, that the removal of a single twig is prohibited; and even the fallen leaves, as they are scattered by the wind, are collected with reverence as relics of the holy place. On the altars at the foot of these sacred trees the Buddhists place offerings of flowers, and perform their accustomed devotions. Another account says, it was planted in the 18th year of the reign of king Devenipatissa, or B.C. 288. A Bo Tree is to be seen within the precincts of every Buddhist temple in Ceylon; one is frequently met with in deserted localities, or near the sites of ancient villages; but the occurrence of a solitary Bo Tree, with its circular buttress of stonework round the stem, indicates the existence, at some former period, of a Buddhist temple. It is the Ficus religiosa.

Mythic.—The tree which stood 'in the midst of the garden of Eden,' was emphatically styled 'the tree of life,' and another 'the tree of knowledge of good and evil.' It was under the oak of Mirah that Joshua (Joshua xxiv. 26) set up the great stone containing the written law; the oak near Bethel which marked the grave of Deborah (Genesis xxxv. 8) was significantly called Allon-bachuth; the palm tree (Judges iv. 5) under which another Deborah, the prophetess, dwelt; the oak under which sat 'the man of God' (1 Kings xiii. 14); the oak in Ophrah under which the angel of God appeared unto Gideon, and conversed with him; also the humble bush in which the Lord revealed himself to Moses in flaming fire on the mountain of Horeb (Exodus iii. 2). We read also in Genesis xviii. 1 that the Lord appeared unto Abraham in the oaks or at the oak of Mamre, for so the Hebrew text and the Greek Septuagint (*προς τη δρυι τη Μαμβρη*) exhibit what in the English text is rendered 'the plains of Mamre.' Abraham's terebinth at Mamre is mentioned by Eusebius to have been worshipped down to the time of Constantine, and is said to be still growing at Eshcol. Abraham planted a grove at Beersheba, to be witnesses to a solemn covenant and to constitute a sacred open-air temple. The trees have perished, but the wells he excavated are still called after him.

The Asherah, rendered groves in 1 Kings xviii. 19, 2 Kings xxiii. 7, was a wooden phallus. Amongst the Celts, the wychelm, elder, and mountain ash seem to have been regarded as possessing occult powers; and the date, pine, cedar, cypress, sycamore, banyan, Bo Tree, the oak of the Druids, the misletoe, the great ash tree Yggdrasil of the Celts and Teutons, the box, and the white thorn, have all been objects of reverence. Amongst the Romans, trees were consecrated to particular divinities (Virg. Ecl. vii. 61):

> 'Populus Alcidæ gratissima; vitis Iacchо,
> Formosæ myrtus Veneri; sua laurea Phœbo.'

In Pliny's Natural History (lib. xii. cap. 1, 'de arborum honore') we read, 'Arborum genera numinibus suis dicata perpetuo servantur; ut Jovi esculus, Apollini laurus, Minerva olea, Veneri myrtus, Herculi populus,' etc. Wreaths and fillets, and chaplets or garlands, were often suspended from the sacred branches; whilst among some nations the practice prevailed of staining trees with blood which had just flowed from the expiring victim, not unfrequently human. Lucan gives a description of the sacred wood near Massilia or Marseilles (Phars. iii.):

Lucus erat longo nunquam violatus ab ævo,
Omnis et humanis lustrata cruoribus arbor,' etc.

Ovid mentions (Metam. lib. viii. 689) the wreaths hanging from a sacred tree, and the addition of recent offerings:

——— 'equidem pendentia vidi
Serta super ramos; ponensque recentia dixi,' etc.

And his story of Eresicthon (Metam. lib. viii.), who impiously violated the ancient woods of Ceres, cutting down her sacred oak, which was in itself equal to a grove, and hung round with garlands, fillets, and other votive offerings:

'Ille etiam Cereale nemus violasse securi
Dicitur, et lucos ferro temerasse vetustos.
Stabat in his ingens annoso robore quercus,
Una, nemus; vittæ mediam, memoresque tabellæ!'
'Sertaque cingebent; voti argumenta potentis.'

Statius (Theb. lib. ii. 736, etc.) records a vow, promising that an hundred virgins of Calydon, who ministered at the altars, should fasten to the consecrated tree chaplets or fillets, white and purple interwoven:

'Centum ibi virgineis votæ Calydonides aris
Actæas tibi rite faces, et ab arbore casta
Nectant purpureas niveo discrimine vittas.'

And the same poet gives an account (Theb. lib. ix. 585) of the celebrated Arcadian oak, sacred to Diana, but itself adored as a divinity, and so loaded with rustic offerings that 'there was scarcely room for the branches:'

'Nota per Arcadias felici robore sylvas
Quercus erat, Trivia quam desecraverat ipsa
Ejectam turba nemorum, numenque colendum
Fecerat
Vix ramis locus,' etc.

Here may also be noticed the veternosis in arboribus tæniis of Arnobius (Contr. Gent. lib. i.), and the arbor vittata of Prudentius (Contra Symmachum, lib. ii.); the sacred tree bedecked with fillets or garlands.

The earliest representations of the tree of life are the date palm, the fig, and the pine or cedar. The date palm is figured as a tree of life on an ancient Egyptian sepulchral tablet, now in the Berlin Museum, certainly older than the 15th century B.C. It is described in the Hebrew Scriptures as growing in a garden planted by the hand of God, and it was connected with Adam's abode in innocence and immortality; but of another tree of good and evil also growing there, he was forbidden to eat. The gardens of Alcinous and Laertes, of which we read in Homeric song, were supposed transcripts of that blissful region. It was the Mesamphalos of the earlier Greeks, and the Omphalium of the Cretans, dominating the Elysian fields, upon whose tops, bathed in pure, brilliant, incomparable light, the gods passed their days in ceaseless joys, and whither the disembodied spirits of the brave and good winged their way. It was the sacred Asgard of the Scandinavians, springing from the centre of a fruitful land, which, watered by the four primeval rivers of milk, severally flowing in the direction of the cardinal points, 'the abode of happiness and the height of bliss.' It is the Haramberezaitim of the Zoroastrian Parsee, upon which the golden throne of Ahrimano is set, and at the base of which are ranged the glorious mansions of his Azad or ministering spirits, and of the blessed whom they serve.

Tree and Serpent.—In the earliest record of Semitic thought, we find the tree and the serpent inseparable,—a tree of knowledge, and a serpent more subtle than any beast of the field.

In ancient Sarmatia and modern Poland, trees and serpents were worshipped by the peasantry up to the limits of the nineteenth century. A relic of the tree-worship, the Stock-am-Eisen, the apprentice tree, is still or was recently standing in the heart of Kenna. In Norse mythology, the Yggdrasil ash tree was represented with one of its roots over the well of knowledge, and with a serpent, Nidhog, gnawing its stem. The figure of the serpent on the pole in Numbers xxi. 8, 9, was the Caduceus of Esculapius.

Groves of trees were planted by the ancient Egyptians within the courtyards of their temples. The law of Moses (Deuteronomy xvi. 21) forbade the Hebrews to plant any tree near the altar of the Lord; but the Alexandrian Jews, in later times, planted groves near their synagogues. Tacitus mentions the sacred groves of Germany; those of the British Druids are known to all readers. De Brosses derives the word Kirk from Quercus, an oak. In the eighth century, St. Boniface found it necessary to cut down a sacred oak; and even recently an oak copse at Loch Siant, in the Isle of Skye, was held so sacred that no person would venture to cut the smallest branch from it.

The Ansariah of the Latakia mountains hold in great veneration the anemone, with its variety the adaryun (shaqaiq-wo-annomān) and the myrtle (as also rihān). This reverence has connection with the worship of Adonis, who at his death was changed by Venus into an anemone. They also reverence the bay tree, the Daphne of the Greeks and Turkish dafne, and this is in commemoration of the goddess Daphne, who, when flying from the enamoured pursuit of Apollo, was converted into a laurel tree. The Bohdda Tharanat of the Burmese is the Canna Indica. Its flowers are red, or sometimes white. Buddhist Burmese believe that it sprang from the Buddha's blood. His brother-in-law Dewadat, offended at not obtaining a separate assembly, rolled down a stone from a hill, which, however, broke into fragments, and only a small piece struck Gautama's toe, and the blood from it became this beautiful flower.

At the present day, also, Muhammadan belief is associated with the tauba tree (see Hosea iv. 13). It is their Sidrat-ul-mantaha of Paradise, the heavenly mansion of the angel Gabriel, which bears a leaf for every human birth throughout the universe, and loses a leaf for every death. The Hindus have their Kalpa tree; and in their mythology four shady trees grew on Mount Meru, —the Nauclea cadamba, Ficus Indica, F. religiosa, and a species of Eugenia. In Swarga, the heaven of the Vedic god Indra, there grows a tree called Kat-paga Veerutcham, which sprang from the ambrosia that was churned by the gods. Individual trees, throughout India, are regarded as habitations of spirits both good and bad, and noonday is the particular period at which their influence is exercised. The demons in whom the non-Aryan races believe, are supposed to take up their dwellings in trees, and this is shared in by many Muhammadans. Hindus invoke their deceased parents beneath the banyan or pipal. Each of the Dii majores of the Hindus claim a peculiar tree. The Ficus Indica is sacred to Siva, the Ficus religiosa to Vishnu, the Butea frondosa to Brahma. The Nerium odorum,

Guettarda speciosa, Calophyllum inophyllum, Chrysanthemum Indicum, Origanum marjoranum, and Artemisia astriaka, are sacred to Siva and Vishnu. The Tulsi is sacred to Vishnu, the Bel to Siva, the Shami and the Darlu to Ganpati. Hindus, as a religious act, plant the Ficus religiosa, Ficus Indica, Ægle marmelos, Jonesia asoca, Mimusops elengi, Ficus venosa, Ficus glomerata, Mangifera Indica, Tamarindus Indica, Dalbergia sissoo, Xanthochymus pictorius, Melia azadirachta, Michelia champaca, Mesua ferrea, Borassus flabelliformis. At the time of planting these trees, no religious ceremony takes place, but when they are dedicated to public or sacred uses, the prutisht'ha ceremony is performed. The Hindu who plants one ushwat'hu, one nimbu, two chumpuku, three nagukeshwuru, seven talu, and nine cocoanut trees, and devotes them with their fruit, shade, etc., to public uses, is promised heaven. In Europe, flowers are dedicated by Christians to the Virgin Mary, and lady's grass, lady's slippers, and others take her name.

Tree-worship prevails throughout Central Africa to the south of Egypt, and in Bruce's time the Shangalla worshipped trees, serpents, the moon, planets, and stars. Amongst the races on the Assam border, the Sij plant, Euphorbia ligularia, is worshipped as Manasa, the serpent goddess; and some of the wild tribes in the Chittagong Hills worship the bamboo (Phulhari bans), and use it in their human sacrifices. The Kayu Tojoak in Singapore is a dark-leaved small tree, to which superstition affixes a sacred character; most old and isolated trees are there held to be karāmat, or sacred. Small white flags are stuck up near them, and often propitiatory offerings made to the spirits supposed to reside on the spot. In some parts of Sumatra, the jawi jawi, or banyan, and some other old trees, are believed to be the dwelling or rather the material frame of spirits of the woods, like the dryades and hamadryades of the Greeks and Romans. Herodotus tells us that Xerxes, after crossing the river Meander, when proceeding on the road to the city of Callatebos, found a plane tree, which, on account of its beauty, he decorated with golden ornaments; and leaving to guard it one of his troops, called the Immortals, advanced on the next day to Sardis, the chief city of the Lydians. And so in Siberia, the Jakut have sacred trees on which they hang articles of iron, brass, copper, etc. The Ostyaks also, as Pallas informs us, formerly worshipped trees. In the seventeenth century, Chardin noticed at Isfahan an ancient plane tree all bristling with nails and points, and hung with rags, as votive offerings from darvesh. Throughout all Persia, he adds, these darakht-i-fazil are venerated by the multitude. Hanway mentions one of these near a caravansary, the rags being offered by persons ill with ague. It is not merely in case of sickness (though a very frequent occasion) that the modern Persians invoke the spirits supposed to dwell in certain trees, by hanging on the branches pieces torn from their garments, but on every undertaking which they deem of magnitude, such as a commercial or matrimonial speculation, the building of a new house, or a long journey; and now, as when Sadi wrote 600 years ago, offerings are daily made by votaries desirous of having children. The Persian Dev-daru tree bears in Arabic a name nearly equivalent, Shajarat al jin, or 'Tree of the Genii;' and even Shajarat Allah, or 'God's tree.' It is a kind of sarv or cypress.

Morier, in the account of his Journey (i. p. 230), mentions that close to the tomb of a Persian saint was a small bush on which were fastened various rags and shreds of garments, which were generally fancied to have acquired, from their vicinity to the saint, virtues peculiarly efficacious against sickness. In Palestine also sacred trees are covered with rags. These rag trees are to be seen in every part of British India. The Japanese hang offerings on the enski tree, chiefly pictures of a man and woman with their backs turned to one another. A decoction of its wood is given as a love philter.

Travellers from Point de Galle to Colombo, in driving through the long succession of gardens and plantations of cocoanut trees, will observe fruit trees of different kinds, round the stems of which a band of leaves has been fastened by the owner. This is to denote that the tree has been devoted to a deity or demon, and sometimes to Vishnu or to the Kattregam temple. Occasionally these dedications are made to the temples of Buddha, and even to the Roman Catholic altars, as to that of St. Anne of Calpentyn. This ceremony is called Gok-band'hna, 'the tying of the tender leaf,' and its operation is to protect the fruit from pillage till ripe enough to be plucked and sent as an offering to the divinity to whom it has thus been consecrated. It is similar to the taboo of Polynesia. After applying a few of the finest as an offering to the spirit, the remainder is appropriated to the use of the owner. When cocoanut palms are so preserved, the fruit is sometimes converted into oil, and burned before the shrine of the demon.

Rain, Humidity.—Dr. Priestley, St. Pierre, Studies of Nature, and Humboldt in his Personal Narrative, directed attention to the importance of protecting the forests of a country, alike as fuel preserves, and as a means of regulating the available rain supply. They were followed in the early part of the 19th century by M. Boussingault, who, while residing in South America, had opportunities for ascertaining the climatic influence exercised by trees. In India, the subject was followed up, in 1840 by Assistant-Surgeon Balfour, in 1846 by Surgeon Gibson. In the year 1847 the Court of Directors of the E. I. Company requested the Government of India to investigate the 'effect of trees on the climate and productiveness of a country, and the results of extensive clearances of timber,' and the British Association referred this subject to a sub-committee. Since then, General Cullen, Surgeon Smith of the Madras Presidency, Mr. Dalzell, the forest conservator of the Bombay Presidency, have continued the inquiry, one of the latest writers being Dr. Brandis, conservator of the Bengal forests. The literature on the subject has become extensive, but has been summarized by Mr. N. A. Daniell (1863), by Surgeon-General Balfour (1878), largely by Professor Rolleston (1880), who wrote on the modifications in the external aspects of nature produced by man's interference. Dr. Wellington Gray of Bombay also wrote; and now it may be said that all scientific men recognise that in a forest-clad region the air is more moist and cooler, the rainfall is more equal, the soil is preserved, springs and rivulets are regulated, and birds, the destroyers of insects, are protected.

The rainfall in British India fluctuates from year to year as much as 50 per cent. on either side of the average, but on the coast the annual average has not diminished. If the quantity falling in the monsoon months in Bombay city for the 60 years 1817 to 1876, averaging 76·1 inches, be arranged in four periods, the result is as follows:—

1817 to 1831 = 81·55 in.	1847 to 1861 = 77·44 in.
1832 to 1846 = 70·14 ,,	1862 to 1876 = 79·37 ,,

The range extending from 33·97 inches in 1824 to 121·98 inches in 1828.

If the Madras rainfall for 64 years be examined in four periods, we find—

1813 to 1828 = 51·53 in.	1845 to 1860 = 50·61 in.
1829 to 1844 = 44·88 ,,	1861 to 1876 = 46·61 ,,

Or if in three periods—

1813 to 1833 = 47·63 in.	1855 to 1875 = 47·04 in.
1834 to 1854 = 50·71 ,,	

Mr. Marsh says (p. 300), 'The forest's general effect is to equilibrate caloric influences, and moderate extremes of temperature.'

Boudin says (Geographie et Statistique Medicales, vi. p. 229), 'Enfin le deboisement doit être considere comme equivalent à la destruction d'un nombre de paratonnerres egal au nombre d'arbres qu'on abat; c'est la modification de l'etat electrique de tout un pays; c'est l'accumulation d'un des elements indispensable à la formation de la grele dansun localité ou d'abord cet element se dissipait inevitablement par l'action silencieuse et incessante des arbres.'

Trees break the force and fall of raindrops, and prevent the over-rapid flowing off of (Rolleston, p. 31) rain-water, and the over-violent washing away of soil.

Professor Wellington Gray tells us (p. 10) that '3000 square inches of cabbage leaves will give off a pint of water daily.'

Professor Pfaff says (Ebermeyer, p. 186), 'From 18th May to 24th October, an oak with 700,000 leaves, each of a square surface of 2325 millimetres, evaporated 120 kilogrammes.'

Vaillant (ibid.) says, 'An oak 21 metres high gives off 2000 kilogrammes of watery vapour in a fine day.'

Hartig (ibid.) says, 'A German morgen (=2·3895 acres) carrying 1000 trees of nine different kinds of conifers and broad-leaved trees of 20 years' planting, exhales daily during the period of vegetation at least 3000 lbs. weight of water.'

Professor Prestwich (Water-bearing Strata, p. 118) says, 'The leaves of a tree of average size give off 2½ gallons of watery vapour daily.'

Mr. Lawes says, '3 plants of wheat or barley gave off 1½ gallon = 250 grains of water for every grain of solid residue in the adult plant.'

M. Fautrat (Observations Meteorologiques, 1877-78, pp. 14-16) has come to the following conclusions:—'1. That when it rains more rain falls over a wooded than over a non-wooded area, and that whilst trees of all kinds possess the power of condensing vapour, broad-leaved trees produce less effect than is produced by the narrow-leaved coniferæ. 2. That, as regards the hygrometric condition of the air, the air over a wooded area contains more watery vapour (p. 18) than an unwooded area, but that the coniferæ have more watery vapour in their circumambient atmosphere than the broad-leaved trees. If the vapour dissolved in the air was visible as are mists, we should see the forests surrounded with a vast screen of moisture; and around the coniferæ this envelope would be more marked than over the broad-leaved trees. What is the source of this vapour? Does it come from the soil; is it the result of evaporation from the leaves, or is it due in the coniferæ to the action of the thousands of points which the whorls of their leaves develope every year? This is a complex question, which the present data of physical science do not enable us to answer. . . . We must therefore ascribe to the soil, and to other unknown causes, this remarkable property which pines have of attracting watery vapour.'

Rolleston says the leaves of the coniferæ wet readily, and intercept one-half of the rain which falls upon them, whilst the broad-leaved trees intercept but one-third (p. 37).

G. H. Rowell (Cause of Rain, 1839 and 1872, Brief Essay on Meteorological Phenomena, 1875) supposes that the molecules of watery vapour are completely enveloped in a coating of electricity, to which they owe their buoyancy. And he supposes this coating and buoyancy to increase and decrease in ratio with the temperature of these molecules. On this theory, efficient conduction of electricity will suffice to precipitate watery vapour either as rain, or as mist, or as dew.

Becquerel's view is that the plague of hail which has so often been observed to follow upon the destruction of the woods of a country, is to be ascribed to the loss of the lightning conductors, which the cut down trees represented while standing, and to the absence consequently of the incessant though insensible agency of the trees.

Professor Grandeau says (Chimie et Physiologie, p. 340), K. E. von Baer (Reden und Studien, 1864, 1873, and 1876), and Oscar Peschel (Neue Probleme, 1876), seem to regard as hopeless any attempt to clothe treeless districts with trees.

It seldom happens that the core of trees is exactly in the centre; they seem in Europe to thicken most rapidly in the direction in which they are most exposed to light and heat.

In Europe the thickening is always on the south side of the tree. In India, so far as it appears, it is in general mostly due west. In all likelihood the excess of solar heat furnishes the explanation in both cases. North of the tropics the sun always shines more or less from the south, and gives out more heat from this than from any other direction. From the tropics to the line, the sun is so nearly vertical, that the mass of heat contributed to a tree or any other body perpendicular to the earth, is from east or west. But from dawn till noon the temperature of the sun is comparatively moderate,—it is from midday till sunset that the vast mass of heat is thrown off, the rays shooting from the westward. In this direction a tree thickens on the same principle that it expands in Europe to the southward.

The teak tree often becomes in part petrified,—that is, the deposition of silica becomes so abundant as to turn a portion of the trunk into stone, usually resembling the petrified wood of Egypt, Sind, Gujerat, Burma, and Treviciary, etc. In Upper India this is not at all confined to the bamboo or the teak, both remarkable for their siliceous secretions, forming in the former a beautiful enamel all over the stem,

furnishing the sharp points of the leaves, and making the upper surface of the leaves of the latter eminently serviceable as sand-paper. The Ghunbhar wood found in the Nepal and Chittagong forests contains such quantities of silica, that the carpenter who contracts to saw it by the foot, makes it a condition in his bargain that it shall contain no stone. The ebony, the tamarind, the sissoo, and the sitsal or jungle rose-wood, contain these secretions, though in much smaller quantities. The most mysterious circumstance connected with the specimens from the petrified forests, is that for every atom of carbon or other organic matter that has been removed, an atom of silica has come in its room, the structure remaining so perfect that under the glass it could not be discovered whether it was a petrified or living specimen under inspection.

The extension of fruit-bearing trees amongst the people is one deserving special attention. Advantages must arise to the great mass of the population from increasing the capabilities of the country in this respect.

Throughout the central and western parts of Peninsular India, the chief cereals and pulses are grown in the cold season of the year. The cultivators regard hedges and trees as injurious to crops, which are annually enclosed by the branches of thorny trees; consequently, when the crops are off the ground, the whole territory has a treeless aspect, and in many places firewood bears a very high price. There are great tracts, however, which could be beneficially planted with trees.

The natives of Central Asia, even in their most sanguinary wars, have refrained from injuring the fruit trees. Deuteronomy xx. 19, 20, forbade the Israelites to cut down any fruit tree in their sieges. When the Khalif Abubakr sent his general Abu Sufian to invade Syria, his instructions were not to cut down any palm trees or burn any fields of corn, to spare all fruit trees, and to slay no cattle but such as were required for the use of his army. And at the present day the Afghans in their constant inter-tribal fights have never injured the mulberry trees, on the fruit of which they so largely subsist.

Nothing irritates Burmese people more than to cut down fruit trees planted by their ancestors; these are the only things they possess in the shape of family heirlooms, which descend from father to son, and from mother to daughter. Women weep over this kind of destruction. A sacred tree of Burma, the thah-byay-bin, seems to be the jack-tree. In cholera times its leaves are kept in a pot or are scattered about the house.

In many British colonies, so prodigal has been the destruction of timber that the authorities have been compelled to adopt measures of restriction. This has been the case notably in Natal (where the depredations of the natives have been considerable), in Victoria and Western Australia, Queensland (where an annual licence fee has been imposed on wood-cutters), and in Ceylon. The climate of Jamaica is said to have become drier of late years in that portion of the island where the greatest clearances have been made; while in St. Helena, where young plantations occupy old clearances, the island suffers less from drought than immediately after the colonisation of the island and the wholesale felling of the trees.

The most ornamental flowering shrubs are those belonging to the genera Rosa, Rhododendron, Azalea, Kalmia, Andromeda, Vaccinium, etc. Among the evergreen shrubs are the holly, the ivy, the jasmine, the box, various heaths, etc. Shrubs are often planted together, forming what are called shrubberies, and when the kinds are judiciously selected and arranged, these collections add greatly to the beauty of the gardens and pleasure-ground where they are introduced.—*Fergusson, Tree and Serpent Worship; Rolleston; Eng. Cyc.* See Fruit; Timber.

TREE FERN. Several tropical plants receive this name, as several species of Cyathea, viz. arborea, dealbata, aculeata, and muricata; also Hemitelia horrida and Karsteniana, Alsophila armata of the West Indian Islands, Angiopteris pruinosa, Marattia, Blechnum Brasiliense, Alsophila excelsa of Norfolk Island, and A. Cooperi of Queensland. Abundance of root fibrils are thrown out from the lower portion of some of their stems, and in some species beautiful scales clothe the stem. Mr. A. R. Wallace (Malay Archipelago) met with species bearing their elegant heads of fronds more than 30 feet in the air.

TREPANG.

Sea slug, ... ENG.	Holothuries, . . . FR.
Beche-de-mer, . . . FR.	Richode, . MAHR., PORT.

This is one of the Holothuriadæ, an edible sea-slug, collected in large quantities throughout the Indian Archipelago, especially among the Eastern Islands. China is almost the only market. There are many varieties, which vary greatly in size, sometimes a foot in length, with a girth of three inches. Some sell at £9, 7s. 6d. per 133½ lbs.; the trepang (Lotong) of Borneo, at £4, 3s. 4d. per 133½ lbs.; the trepang (Buangakulit) of Singapore, £3, 15s. per 133½ lbs.; the trepang (Pandans) of Borneo, £5 per 133½ lbs. The inhabitants of Celebes, receiving advances from the resident Chinese, have been long in the habit of making annual voyages in their quest of trepang. Gutted, dried in the sun, and smoked, it is considered cured, and fit for its only market, that of China, to which many hundred tons are yearly sent for the consumption of the curious epicures of that country. The fisheries of the trepang for China resemble that of the anchovy to the people of Europe. See Holothuria.

TRETA YUGA, SANSK., from Tree, three, and Yuga, a definite period of time. The four yuga are numbered according to the quantity of religion in each; thus the satya has four parts; the treta, three; the dwapara, two; and the kalee, one. The Treta yuga is the Hindu silver age, and comprises a period of 1,296,000 years. See Yuga.

TREVACARRY. In the chain of mountains which pass by Gingi, fossils are found. Those of Trevacarry, a village 21 miles from Pondicherry, are worthy of observation.—*Sonnerat's Voyage*, p. 5.

TREVELYAN, SIR CHARLES EDWARD, K.C.B., of the Bengal Civil Service, wrote on the condition of the people of India, 1839. He served in the Home Treasury Office, in 1859 was Governor of Madras, subsequently Financial Secretary of India. Bold in design, energetic in execution, earnest in manner, thirsting for

learning and knowledge, in conversation he ever took for granted that all were equal to himself. —*Thurlow*, p. 34.

TREWIA NUDIFLORA. *Linn., Roxb.*

Tetragastris ossea, *Gærtn.*	Rottlera Indica, *Willd.*
Trewia macrophylla, *Roth.*	R. Hooperiana, *Blume.*
T. macrostachya, *Klotsch.*	
Pitori, . . . BOMBAY.	Kat koombla, . S. CAN.
Kanshi, . . . MALEAL.	

A middling-sized tree, common throughout the plains of the Madras Presidency, also in Bengal, Ceylon, Java, and Sumatra; the timber is soft, and of no value; root used medicinally.—*Beddome, Fl. Sylv.* xxiv. p. 281.

TRE-YANG-DONG-YANG, a celebrated rock fortress of Burma. It is said once to have been used as a fortress by the Karens against the Burmese, and to have been held for a long time, until, the supply of water and provisions being exhausted, they were starved to death. (There is no spring in the basin.) From this incident arose the name of the place, Dong Yang, Rock of Weeping, and Tre Yang for the brook below, Brook of Weeping.

TRIAD. The triads of the nations are many. Geryon, the three-headed, is famous in classical antiquity:

'Qualis Atlantiaco memoratur littore quondam,
Monstrum Geryones immane tricorporis iræ,
Cui tres in pugna dextræ varia arma gerebant
Una ignes sævos.'

'Thus on the coast, from hoary Atlas named,
Stood triple Geryon: in his three right hands
Three weapons fierce he brandished, vengeful fire.'

The triad of the Greeks, so frequently referred to by Proclus, has been largely examined by Cudworth. The inhabitants of Northern Europe had various trinities. That of the prose Edda is Odin, Vile, and Ve; of the Voluspa, Odin, Hœnir, and Ledur. The Scandinavians swore by Odin, Friya, and Njord.

The Nornir or Destinies were three. Among the Druids the number three was sacred and mystical; hence their writing-rods of three sides, and the fondness of the ancient British bards for the triad, tribanau, or triplet—

'Eiry mynydd—gwangeus Iar—
Gochwlban gwynt ar dalar—
Yn yr ing gorau yw'r Car.'

'Snow of the mountain! the bird is ravenous for food—
Keen whistles the blast on the headland—
In distress the friend is most valuable.'

The triad of the Babylonian and Assyrian was Ana, Bel, and Hea, lords, respectively, of the heavens, of the visible world, and of the sea and infernal regions. Ana was originally worshipped at Erech, but in later times the goddess Ishtar took his place at this city; Bel had his chief seat at Nipur, and Hea at the city of Eridu.

The triad among the Hebrews was represented by the three yod, or by the high priest extending the thumb and two forefingers as he stretched his right hand over the assembled multitude. The Pope of Rome adopts this form.

Trinity of Christians, God the Father, God the Son, and God the Holy Ghost.

The Egyptian triad was of three brothers.

The triad of the Southern Buddhists has Gautama as the chief, represented by three perpendicular lines, sometimes united at the bottom (tharagon). Buddha, Dharma or the Law, and the Church or Congregation, are represented by the Trisul or Triratna. San-she-Joo lae, the Tathagatha of the three ages, is the Buddhist trinity of China. The Hindu trinity is Brahma, Vishnu, and Siva.

The Chaldees had two triads, each god with a wife or female power, like the sakti of the Hindus. Their first triad was Il or Ra, the supreme; Ana; and Hea, the god of life. Their second triad was Sin or Hurki, the moon-god; San or Sansi, the sun-god; and Vul or Iva, the god of the atmosphere.

Secret triad societies have been formed all over the Chinese empire, the members of which have seen with impatience the Manchu domination, and cherished the idea of overthrowing it to obtain a national government.

The members are initiated with secret ceremonies. It has a religious character, with political aspirations. The members name it Tien-te-jin, Heaven, Earth, Man. In the reign of the emperor Kea King, it was styled Tien-te-hwuy, *i.e.* the Celesto-terrestrial Society, but the name by which they chiefly distinguish themselves is Hung Kea, or the blood family.

Three pure ones are recognised by the Taouist of China.

The Buddhist triad or mystic syllable A U M, is thus interpreted:—

A, the Vija mantra of the male Buddha, the generative power.
U, the Vija of the female Dharma or Adi Prajni, the type of productive power.
M, the Vija of Sanga, the union of the essences of both.

Three precious gems of the Buddhists are Buddha, Dharma, Sangha, the lord, the law, the assembly.

A triple god is described by Kircher among the Japanese; and the celebrated triad of the Hindus comprise Brahma, Vishnu, and Siva.

The Ansariah recognise Miaana, Ism, Bab, Spirit, Name, and Door. See Trimurtti.

TRIANGLE. This, in Hindu mythology, when the apex points downwards, is symbolical of Vishnu, considered as the principle of humidity; to descend being the property of water, and it naturally assumes that figure. When with the apex upwards, it is a symbol of Siva as fire, it being the unvaried form of the igneous element. —*Moor's Pantheon*, p. 23.

TRIANTHEMA CRYSTALLINUM. *Willde.*

T. triquetra, *Rottler.*	Papullaria crystallina, *For.*
Alethi, ... HIND.	Kooka-pal-koora, . TEL.

A plant of Arabia and India, used as a spinach. —*Roxb.* ii. p. 444.

TRIANTHEMA DECANDRUM. *Linn.*

Zallia decandra, *Burm.*

Gado bunya, . . BENG.	Swit punarnavi, SANSK.
Biskhopra, . . . DUKH.	Vallai sharunne, . TAM.
Gadabuni, . . . HIND.	Tella-galijeru, . . TEL.

A weed common in Peninsular India; its roots, size of a small finger, light brown outside, white within, are aperient. Four pagodas weight of bark of the root made into a decoction with one pound water, and boiled down to half a pound, will open the bowels.—*Roxb.; Ainslie; O'Sh.*

TRIANTHEMA INTERMEDIA. *Stocks.*

Marmay, . . . PANJ.	Wah, Waho, . . SIND.

Seeds used for food in times of scarcity. Dr. Stocks notices the Waho of Sind, T. intermedia, *Stocks;* also T. micrantha, *Stocks*, the Chotilani or Teysur lani of Sind.

TRIANTHEMA OBCORDATUM. *Roxb.*

T. monogyna, *Roxb.*		T. pentandra, *D. C.*	
Sabuni,	Beng.	Sharvalay kiray,	Tam.
Lal and Swet-sabuni,	,,	Sharanne,	,,
Nasurjangi,	Dukh.	Ambati maddu,	Tel.
Warma,	Hind.	Yerra galijeru,	,,
Punarnavi,	Sansk.	Bodo-pail-kura,	,,

A troublesome weed, springs up everywhere; the young leaves used as spinach; when somewhat old, mixed with others, and used as greens. The root is found in bazars; colour pale, much wrinkled, bitterish, and rather nauseous to the taste; is considered cathartic, and given in powder to the extent of two teaspoonfuls twice daily with a little ginger. The fresh root also is given as a cathartic mixed with ginger.—*Jaff.; O'Sh.; Roxb.*

TRIAS OBLONGA. Many of the mango trees of Burma have this species of trias growing on them. It is the smallest plant of the orchid tribe in the Tenasserim Provinces.—*Mason.*

TRIBULUS, a genus of plants belonging to the natural order Zygophyllaceæ. T. alatus, T. lanuginosus, T. cistoides, *L.*, and T. terrestris occur in India. One or other species is common in the plains; some occur to from 3000 to 5000 feet in the Himalaya, and one is found to 10,500 feet in Tibet. T. cistoides grows in the gardens of India; it has some aperient properties.

TRIBULUS LANUGINOSUS. *Linn.*

T. terrestris Zeylanicus, *Burm.*

Khussuk-us-saghir,	Arab.	Gokru-khurd,	Pers.
Peh-tsih-li,	Chin.	Gokshuruka,	Sansk.
Woolly caltrops,	Eng.	Sudu mostra,	,,
Gokuru, Gokru,	Hind.	Sembu niringhi,	Singh.
Neringil,	Maleal.	Nerinji,	Tam.
Bakhra, Bhukri,	Panj.	Chiri palleru,	Tel.
Kokullak,	,,	Yerra palleru,	,,

The woolly caltrops grows throughout India. It has large, bright yellow, sweet-scented flowers, and angular, thorny fruits all the year round. The generic name is from the Greek τριβολος, three-spiked or three-pointed. This is often confounded with the Pedalium murex. The seeds and capsules are highly mucilaginous, and in China are used in spermatorrhœa.—*Roxb.; Stewart; Smith; Jaffrey; Ainslie; Riddell.*

TRIBUTARY STATES or Tributary Mahals, the designation of 19 Indian chiefships, between lat. 20° 3′ 55″ and 21° 57′ 40″ N., and long. 84° 21′ 41″ and 86° 48′ 41″ E. Their names are Angul, Athgarh, Bankigarh, Baramba, Baripada, Boad, Daspalu, Daspur, Denkanal, Hindol, Hondapa, Keonjhur, Khandpara, Lakara, Narsingapur, Nilgiri, Nyagarh, Ranpur, Talchir, and Tigaria. About 50,000 Mons or Peguans pay tribute to Siam; and between latitudes 3° and 7° N. the Malays in the principalities of Patani, Calantan, and Tringanu on the east, and on the west those of Queda and Perak, are subject, through the governor of Ligor, to the Siamese sovereignty; but that sovereignty is by no means undisputed by the inhabitants in the less accessible parts. Many of the chiefships of British India are tributary to the British, paying annually money, or sending shawls, horses, elephants, etc. In the year 1880-81, tribute, chouth contributions for the pay of local corps, and succession fees, amounted to £742,209.—*Bowring's Siam*, i. p. 83.

TRICHILIA EMETICA.

El-caja, Roka, Arab. | Djous-el-kai (fruit), Arab.

Common on the mountains of Yemen and in Senegal. The fruit is used by the Arabs in powder, mixed with oil, against the itch, and also for washing the hair.—*O'Sh.*

TRICHINOPOLY, a large town in the Carnatic portion of the Peninsula of India, in lat. 10° 49′ 45″ N., and long. 78° 44′ 21″ E.; population, 84,449. Its Hindu name, Tri-Sira-pelly, or place of the three-headed, is from a tradition. Muhammadans call it Nathar-Nagar, from a holy man called Nutter. It is a British military cantonment, and gives its name to a revenue district in the Madras Presidency, lying between lat. 10° 37′ and 11° 30′ 30″ N., and between long. 78° 12′ and 79° 30′ E. Area, 3515 square miles; pop. according to the census of 1881, 1,215,033 souls. The river Kaveri (Cauvery), and its branch the Colerun, are the most important rivers in Trichinopoly. These rivers almost rejoin each other about 10 miles east of Trichinopoly city.

The Cauvery river enters the district in the west; it is 1200 yards wide. About 12 miles west of Trichinopoly it is intersected by the island of Srirangam, on which is a magnificent Hindu pagoda, and the northern branch takes the name of the Colerun, which flows on to the sea near Porto Novo, the Cauvery branch flowing to the Tanjore district, which it waters. The irrigation is secured by two dams or anicuts, the upper at Srirangam, 874 yards long, across the head of the Colerun, including two islands, erected in 1836 by Captain (Sir Arthur) Cotton; and a lower dam across the same river, 60 miles farther to the eastward, which supplies the Veranum tank, and irrigates the Chellumbrum and Manargudi taluks of S. Arcot. The grand anicut is an ancient work constructed by a former sovereign of Tanjore. It secures the irrigation of Tanjore, and allows the surplus water to go to the Colerun.

Trichinopoly fortress was besieged in 1751-55 by Chanda Sahib and the French. Inside the fort is the Trichinopoly rock, a mass of gneiss, which rises, like many others in the district, abruptly out of the plain to a height of 273 feet above the level of the street at its foot. The ascent to this rock (Tayumanaswami-Malai) is partly by a covered stone staircase, and partly by steps cut in the rock itself. Upon it is a Siva temple, and at the top a small temple dedicated to Pillaiyar (Ganapati). Every year (August) a festival at this temple attracts a crowd of pilgrims. In 1849 (22d August), owing to some confusion in descending, a panic occurred, and at least 250 persons lost their lives in the crush. In 1871, in the population, there were 1,115,776 Hindus, 32,024 Musalmans, 50,822 Native Christians, 1400 European and Eurasian Christians, and 143 Jains. The most numerous Hindu castes are the Villalar (200,853) and the Vannian (398,410). Brahmans number 31,428. The non-Aryan races are numerous.

TRICHIURUS, a genus of edible fishes of S. Asia seas. T. lepturus, *Linn.*, the silvery hair-tail, is one of the largest of the flattened, small-scaled fishes. It occurs at Shan-tung, in the gulf of Peh-chi-li in China, in N. China, and Corea, and is largely salted, dried, and eaten. It is captured near the surface.

TRICHODESMA INDICUM. *R. Br.*

Chota kulpha,	Hind.	Gao zaban,	Sind.
Rat-mandoo,	Kash.	Nila kai,	Tam.
Rati surkh,	,,	Guva gutti,	Tel.
Kowri booti,	Panj.		

It is used for purifying the blood, also as a diuretic, and a cure for snake-bites.—*Powell; O'Sh.*

TRICHODESMA ZEYLANICUM. *Brown.* Grows in Abyssinia, S. Asia, and extra-tropical Australia. It is a plant of Ceylon and the Peninsula, and is the Buro kulpha of Bengal, and the Borago Zeylanica of Linnæus. Dromedaries evince an extraordinary predilection for it. T. Africanum, *R. Br.*, and T. spinulosum, are found in the same region.—*Voigt; Von Mueller.*

TRICHODESMIUM ERYTHRÆUM, a filamentous alga which the Red Sea is supposed to have obtained its name from. It is of a blood-red colour, often covers large areas, and appears and disappears somewhat capriciously. It has as synonym, T. Ehrenbergii. During the year 1823, Ehrenberg spent several months on the borders of the Red Sea, at Tor, very near Mount Sinai, and there witnessed the surprising phenomenon of the blood-red coloration of the entire bay, which fronts the part of that town. The open sea, outside the coral reef, was of the ordinary colour, but the short waves of the calm sea bore to the shore, during the heat of the day, a mucilaginous matter of a blood-red colour, depositing it on the sandy beach, so that in the space of little more than half an hour, the entire bay was margined by a red border many feet in width. The coloration was owing to minute, almost invisible, flocci, some greenish in colour, others of an intense green, but mostly of a deep red. The water in which they floated was, however, perfectly colourless. This very interesting phenomenon was investigated at leisure, during several days, with every possible care. The colouring matter was examined with the microscope. The flocci were found to be composed of little bundles of oscillatoria filaments; they were in shape fusiform or elongated, were irregular, rarely more than a line long, and were invested with a kind of mucilaginous sheath. The flocci themselves did not exactly resemble one another, nor did they contain filaments. Whilst the sun was above the horizon, the flocci remained on the surface of the water in the glasses he had brought up; during the night they sank to the bottom, or when he shook the glass, though remounting to the surface some little time afterwards. T. Hindsii, also of a blood-red colour, has been found off the west coast of S. America.

Two minute species of Trichodesmium, which have been collected in the Atlantic, imparted a cloudiness to the water over a very large area, but were not coloured. They were so diffused that it was difficult to collect the excessively minute flocci, far smaller than those at Colombo, and colouring the sea there.

Dr. Collingwood mentions that he had never seen red Trichodesmium, or any tint of red. He had seen it yallowish-brown. He had seen the Indian Ocean red from myriads of minute red crustaceæ, and in the Formosa Channel from red gelatinous worms, but never by Trichodesmium. —*Ehrenberg on the Coloration of the Red Sea, in Poggendorf's Annals; Annals and Magazine of Natural History; Ceylon Observer.*

TRICHOGASTER FASCIATUS, the butterfly fish of the Bay of Bengal.

TRICHOGLOSSUS ENTELES and T. iris are pretty little lorikeets of Timor. T. ornatus, of Celebes, and T. Swainsonii, are beautiful brush-tongued parrakeets.

TRICHOPODUS TRICHOPTERUS. *Pallas.* Like the rest of the family, this fish is capable of sustaining life out of water, particularly if kept in wetted fresh leaves, or occasionally sprinkled with water. At Penang it is numerous in streamlets and ponds, where it is eaten by the poorest classes. The exquisite beauty of the metallic iridescent colours makes these fishes acquisitions in garden tanks. Like Osphromenus olfax, they are very pugnacious among themselves. A species of Trichopodus was discovered by Dr. Campbell in the rivers of the Sikkim passes in the northern frontier of Bengal.

TRICHOSANTHES, a genus of plants belonging to the Cucurbitaceæ. Several East Indian species, anguina, bracteata, cordata, cucumerina, dioica, and heteroclita, are known; some are used as vegetables, but others contain a purgative principle. T. amara, of St. Domingo, has bitter and astringent seeds, sometimes emetic.—*O'Sh.*

TRICHOSANTHES ANGUINA. *Linn.*

Chichinga,	Beng., Hind.	Galar tori, Pandol,	Panj.
Jijinga, Jinga, ,,	,,	Pottola, ...	Sanse.
Pai-len-mwæ, . .	Burm.	Kadotri, ...	Sind.
Snake gourd, . .	Eng.	Rebhri, ...	,,
Chichunda, . . .	Hind.	Podi-urilanga, . .	Singh.
Purwar, ...	,,	Pudalunkai, . .	Tam.
Petala ular, . .	Malay.	Lingapotla, . . .	Tel.
Petalri-ular; . .	,,	Pottlakaya, . . .	,,

This is generally cultivated for its long snake-like fruit, used in curries; is sown in the rains, and grown generally over a high pandall, in order that the fruit may have space to hang down; a small stone or weight is tied to the end to increase its length, which varies from a foot and a half to three feet or more. Raw, it resembles a cucumber in flavour, but is better dressed in a stew or curry, and often cut into lengths, and filled with a preparation of minced meat. This is peculiar to India, is of easy culture, and is to be seen on trellises around the doors of the native cabins; the fruit grows beautifully striped, small, and tapering, so that, hanging down from the trellis, they look like striped snakes suspended from the foliage of trees.—*Roxb.; Riddell; Jaffrey; Mason.*

TRICHOSANTHES BRACTEATA. *Lam.*

T. palmata, *Roxb.*
T. kaki konda, *Roxb.*
T. laciniosa, *Wight.*
T. anguina, *Wall.*
Modecca bracteata, *Lam.*

Buro makal, . .	Beng.	Abuva, Avva guda,	Tel.
Anko-rute, . . .	Tam.	Kaki donda, Abuba,	,,

This grows in both the Peninsulas of India, in Bengal, the Dehra Doon, and the Khassya mountains. It is a large climbing plant, with a globular fruit, which is regarded by the natives as poisonous, but the stem is much esteemed in diseases of cattle, and in inflammation of the lungs.—*Drs. Roxb., Voigt, Gibson.*

TRICHOSANTHES CORDATA. *Roxb.*

T. palmata, *Roxb.* | Bhooin-koomra, . Beng.

This plant grows on the banks of the Megna river, where the inhabitants use the root as a substitute for calumba root, and it has been sent to England as the true calumba of Mozambique. It has large white flowers. Its Bengali name is identical with that of the sweet potato, Batatas paniculata. The root is tuberous, perennial, growing to the size of a man's head.—*Roxb.; Voigt.; O'Sh.*

TRICHOSANTHES CUCUMERINA. *Linn.*

T. cordata, *Wall.*	T. palmata, *Roxb.*
Ban-potel, . . . BENG.	Podavalam, . . MALEAL.
Tha-b'hot-kha, . . BURM.	Pepudel, Pudel, . TAM.
Bitter gourd, . . ENG.	Chend potla, Patola, TEL.
Jangli chuchinga, . HIND.	Adavi chedu, . . ,,

This plant grows in the valleys of the Himalayas, in hedges in Bengal, in the two Peninsulas of India, and in Tenasserim. Its unripe fruit is very bitter, but is eaten by the natives in their curries, and is reckoned anthelmintic.—*Roxb.; Voigt; Mason; O'Sh.*

TRICHOSANTHES DIOICA. *Roxb.*

Bun-putol, . . . BENG.	Pulwul, ... HIND.
Ko-lau, Kwa-lau, CHIN.	Kommu potla, . . TEL.

This occurs wild in Bengal, but is cultivated there for its unripe fruit and tender tops, which are eaten in curries and reckoned very wholesome. An alcoholic extract of the unripe fruit is described as a powerful and safe cathartic in 3 to 5 grain doses, repeated every third hour till the desired effect is produced.—*Roxb.; Voigt; O'Sh.*

TRICHOSANTHES INCISA. *Rottl.*

Birme ke-jur, . . DUKH.	Chinna avagooda vayroo,
Sirroo corrutti-vayr, TAM.	TEL.

This has a light-coloured and very bitter-tasted root. Pounded small and mixed with margosa oil, it is applied to offensive sores inside the ears, and is also poured up the nostrils in cases of ozæna. The taste of the rind is singularly bitter, but in three-grain doses, thrice daily, it produced no sensible effect.—*Ains.; O'Sh.*

TRICHOSANTHES VILLOSA of Java, fruit acts like colocynth.—*O'Sh.*

TRIDACNA, a genus of molluscs of the family Tridacnidæ, comprising the genera Tridacna and Hippopus, the shells of which are the largest known amongst acalephous molluscs. T. gigas is sometimes 4½ feet long, weighing 500 lbs. T. safrana is of a beautiful blue round the edges; a third species is T. squamosa. There are known six recent and one fossil species. Tridacna shells are used in some of the islands of the Pacific Ocean, at Lesson Island, at Ualan, at some of the Live Islands, and in New Guinea, to form adzes. —*Woodward; Figuier.*

Tridacna gigas, the gigantic clam shell, was formerly of such value, that the Republic of Venice presented one to Francis I., who gave it to the church of St. Sulpice in Paris, and it is still used there as a basin for holy water. It is the Benitier of the French. Its shell is transversely oval, with great imbricato-squamous ribs, the scales short, arched, and lying near together; the interstices of the ribs are not striated. The size and weight of this immense bivalve, the largest and heaviest known, combined with the beautiful marble-like appearance and whiteness of the inside of the valves, have always caused it to be sought for as an ornament for grotto-work or for garden fountains; and, indeed, the valve of a large individual forms a very picturesque basin for catching the clear falling water, and transmitting it through the deep interstices of its indented edge to the reservoir below. This species can hardly have been the Tridacna of Pliny (Nat. Hist. xxxii. 6), but his Pedalia or oysters, a foot long, from the Indian Sea, may have been one of the Tridacnæ of modern authors. At Carteret Harbour, New Ireland, the natives obtain many very large individuals, whose flesh they eat raw. This species occur at Tongataboo, at the Moluccas, at Timor, and at Waygiou, and appear to inhabit rather shallow water.

Hippopus maculatus, *Lam.*

Chama hippopus, *Linn.*	Tridacna maculata, *Quoy.*
Hippopus maculatus, *Lam.*	Bear's paw clam.

This well-known but beautiful species, now much used in the ornamental arts for inkstands, etc., has a traversely ovate shell, which is of moderate size, ventricose, ribbed, subsquamous, and white spotted with red or purple; the lunule is heart-shaped and oblique. The naturalists of the Voyage of the Astrolabe found this species at Carteret Harbour, New Ireland, and also at Vanikero, where they collected specimens left dry on the reefs. It spins a byssus.—*Eng. Cyc.; Woodward*, p. 453.

TRIDANDI, a Saiva mendicant, who carried in his hand three wands, to illustrate his command over his thoughts, words, and acts. This practice, however, has ceased to be observed. They are in habits like Gosains, and do not marry. Their bodies after death are buried, not burned.—*Wils.*

TRI-DASA. SANSK. 3 times 10; the 33 Hindu divinities, viz. 12 Adityas, 8 Vasus, 11 Rudras, and 2 Aswins.—*Dowson.*

TRIDENTS are affixed to taffrails of junks, to tops of houses, to ward off evil; with the same object three earthenware guns are placed in China on a house, also a cock.

TRIDODYA, in the Doab, a sort of finger-ring.

TRIFOLIUM, a genus of plants belonging to the natural order Fabaceæ. Many species are known. They are the trefoils or clovers so largely used in Europe as fodder for cattle. Dr. Irvine mentions T. Indicum, called in Hindi Bun-mether, Jhunjurie or Goolabi, as very common in Ajmir, Marwar, and Jeypore. Camels are fond of it; other cattle do not eat it. T. repens, the white or Dutch clover, is said to be the shamrock worn by the Irish as a badge. Leaves with three divisions have from remote times been regarded with superstitious reverence. T. pratense, *Linn.*, is the ordinary red clover of Europe, Asia, and Japan.—*F. Von Mueller; Voigt*, p. 210.

TRIGARTHA, lit. 3 strongholds, the modern Kangra and Jalandhar Doabs.

TRI-GARTTA, the modern Doab and Kangra.

TRIGLIDÆ, the gurnard family of fishes, of the order Acanthopterygii. The family is arranged into four groups.

FIRST GROUP. Heterolepidina.

Gen. 8 Chirus, 2 Ophidion, 1 Agrammus, 1 Zaniolepis.

SECOND GROUP. Scorpænina.

Gen. 25 Sebastes, 21 Scorpæna, 1 Glyptauchen, 8 Pterois, 1 Pteroipichthys, 1 Tænianotus, 4 Centropogon, 2 Apistus, 1 Enneapterygius, 1 Pentaroge, 10 Tetraroge, 7 Agriopus, 8 Prosopodasys, 9 Aploactis, 1 Trichopleura, 1 Hemitripterus, 1 Amphiprionichthys, 2 Synancidium, 2 Synanceia, 2 Micropus, 3 Minous, 6 Pelor, 1 Chorismodactylus.

THIRD GROUP. Cottina.

Gen. 2 Podabrus, 2 Blepsias, 1 Nautichthys, 1 Scorpænichthys, 26 Cottus, 10 Centridermichthys, 1 Icelus, 1 Triglops, 2 Hemilepidotus, 2 Artedius, 1 Ptyonotus, 1 Polycaulus, 29 Platycephalus, 1 Hoplichthys, 2 Bembras, 8 Prionotus, 6 Lepidotrigal, 14 Trigla.

FOURTH GROUP. Cataphracti.

Gen. 10 Agonus, 2 Aspidophoroides, 6 Peristethus, 4 Dactylopterus, 1 Cephalacanthus.

Dactylopterus volitans is of the Mediterranean, and D. orientalis of the East Indies. The flying

gurnards raise themselves into the air by means of their pectoral fins, and swing themselves forward for a hundred feet.

TRIGONA LÆVICEPS, *Smith*, of Burma and Singapore, the bee which buries the Vatica robusta and other dammer resins. It is the Kalliada of the Malealam hill-men. The Burmese call the resin Pwai-nyet.

TRIGONELLA, a genus of plants of the natural order Fabaceæ or Bean tribe. There are about thirty species. T. cœrulia, corniculata, fœnum-græcum, and ornithopodioides occur in India. T. corniculata, *Linn.*, T. elatior, *Sm.*, a native of France, but cultivated in India. It has small yellow flowers, and fruits in the cold season.

TRIGONELLA FŒNUM-GRÆCUM. *L.*

Halbeh, Shimlet, .	ARAB.	Shemlit, ...	PERS.
Mentia, ...	CAN.	Uluwa, ...	SINGH.
Fenugreek, . . .	ENG.	Vendium, . . .	TAM.
Methi, ...	HIND.	Menti kura, Mentual,	TEL.

This plant is a native of the south of Europe, but is cultivated in Asia Minor and in India. Mucilage, starch, fixed oil, and colouring matter constitute the greater part of its seed, which are used by the native practitioners in dysenteric affections, cough, and special diseases, and the Arabs employ it in poultices and fomentations. It is cultivated for a pot-herb, considered very wholesome. It imparts a very strong odour and taste to curries, and the seeds are said to be slightly tonic. They are also used as coffee after roasting, and to form a yellow dye, and are said to be emmenagogue.—*Powell.*

TRIGONOMETRICAL SURVEY of India was begun at Cape Comorin in 1800. Its originator was Colonel Lambton, who has been succeeded by Sir George Everest, Sir Henry Waugh, Colonel J. T. Walker, and Colonel Thuillier, and about three-fourths of the whole of British India has been surveyed. It is calculated that by the year 1886, the whole of the vast area of India, 1,382,624 square miles, will have been completed by the Grand Trigonometrical Survey, and by the Topographical and Revenue Surveys, though portions may require resurveying. In the triangulations of India, chains of triangles have been carried along the principal meridians and the course of the eastern and western frontier, and these were connected together by other chains, the northernmost of which followed the Himalayan frontier line, while others were carried along certain parallels of latitude at convenient intervals. Colonel Everest's meridional arc is the axis of the system. Base lines are measured at the extremities of the longitudinal chains, and at the points where the chains cross Colonel Everest's arc. The great quadrilateral figure which connects Dehra Doon with Kurachee comprises four base lines and about 2500 angles, appertaining to 8 chains of triangles.—*Ann. Ind. Admin.*

TRIGONOMETRY as known to the Hindus appeared to Professor Playfair to have been drawn up by one who was deeply versed in the subject, and who knew more than he thought necessary to communicate. It is probably a compedium formed by some ancient adept in geometry, for the use of others who were mere practical calculators.—*Elphinstone*, p. 128.

TRIGONOSTEMON LAWIANUS. *Nimmo.*

Dimorphocalyx glabellus, *Thw.*	Croton Lawianus, *Nimmo.*
	Welle wenne, . . SINGH.

A very common middling-sized tree in the dense, moist western forests of the Peninsula, from Canara down to S. Travancore, up to 3500 feet elevation on the Bombay Ghats and in Ceylon. —*Beddome, Fl. Sylv.*

TRIKALA, of the Cis-Sutlej, is wheat and barley sown together. It is called guji in the Panjab.

TRIKANDA, a Sanskrit vocabulary in three chapters.

TRIKUTA, SANSK., from Tri, three, and Kuta, a mountain peak. Tri-kuta-devi, three-peaked or trident goddess, a triple-peaked mountain in the Outer Himalaya, south of Chaneni, held sacred by the Hindus. It is a curious three-peaked hill, the last culminating point of the range separating the Chenab from the Ravi.—*Thomson's Tr.* p. 311.

TRI-KUTA. Colonel Tod tells us that the infant Bappa, son of Nagadit, when only three years old, was conveyed to the fortress of Bhandere, where he was protected by a Bhil of Yadu descent. Thence he was removed for greater security to the wilds of Parassur. Within its impervious recesses rose the three-peaked (tri-kuta) mountain, at whose base was the town of Nagindra, the abode of Brahmans, who performed the rites of the great god. In this retreat passed the early years of Bappa, wandering through the alpine valleys, amidst the groves of Bal and the shrines of the brazen calf. The most antique temples are to be seen in these spots,—within the dark gorge of the mountain, or on its rugged summit, in the depths of the forest, and at the sources of streams, where sites of seclusion, beauty, and sublimity alternately exalt the mind's devotion. In these regions the creative power appears to have been the earliest, and at one time the sole object of adoration, whose symbols, the serpent-wreathed phallus (lingam), and its companion the bull, were held sacred even by the children of the forest. In these silent retreats Siva (Mahadeva) continued to rule triumphant, and the most brilliant festivities of Udaipur were those where his rites were celebrated in the nine days sacred to him, when the Jain and Vaishnava mix with the most zealous of his votaries. But the strange gods from the plains of the Yamuna and Ganges have withdrawn a portion of the zeal of the Gehlot from their patron divinity Eklinga, whose dewan or vicegerent is the rana. The temple of Eklinga, situated in one of the narrow defiles leading to the capital, is an immense structure, though more sumptuous than elegant. It is built entirely of white marble, most elaborately carved and embellished; but, lying in the route of a bigoted foe, it has undergone many dilapidations. The brazen bull, placed under his own dome, facing the sanctuary of the phallus, is nearly of the natural size, in a recumbent posture. It is cast (hollow) of good shape, highly polished, and without flaw, except where the hammer of the Tartar had opened a passage in the hollow flank in search of treasure. Amongst the many temples where the brazen calf forms part of the establishment of Bal Cesar, there is one sacred to Nanda alone, at Naen, in the valley. This lordly bull has his shrine attended as devoutly as was that of Apis at Memphis; nor will Eklinga yield to his brother Serapis. The changes of position of the Apis at Naen are received as indications of the fruitfulness of the seasons, though it is not

apparent how such are contrived. There are perhaps in India millions of the idol Nandi, the bull or calf vahan of Siva, and it is always placed in a seated posture looking towards the lingam. —*Travels*, 136; *Tod's Rajasthan*, i. 222.

TRIKUTA, a mountain in Kashmir, forming part of the range bounding the valley of Srinuggur on the south; lat. 32° 58′ N., long. 74° 37′ E. The summit is covered with snow almost throughout the year. According to Thornton, on its northern flank a spring gushes from the rock in regular pulsations,—hot in winter, but cooled by intermixture of the melting snows during the summer months. The Hindus regard this spring as holy, and pay pilgrimages to it from considerable distances.—*Imp. Gaz.*

TRI-LINGAM, said to be the origin of the name Telinga. It means three lingams.

TRI-LOCHNA. SANSK. Three-eyed, a name of Siva.

TRILOKA, the three worlds, heaven, earth, and hell, or earth, sky, and heaven. In Hindu mythology, fourteen spheres are recognised. Triloka-Darpan, or Mirror of Three Worlds, a geographical tract of the Buddhas.—*As. Res.* iii. 299.

TRIMBAK, a small town in the Nasik district of the Bombay Presidency, in lat. 19° 54′ 50″ N., and long. 73° 33′ 50″ E., 20 miles S.W. of Nasik town; population (1872), 3763. Trimbak is visited by all the pilgrims who go to Nasik, and has a special fair in honour of Trimbakeswar Mahadeo, held on the occasion of the planet Jupiter entering the sign Leo, which event happens generally once every twelve years. The town is 4255 feet above the sea. The hill fort at Hursh, 3 miles W. of Trimbak, is 5659 feet. Otur, near Trimbak, is 4096 feet.—*Imp. Gaz.*

TRIMBUK JI, an officer under the last Peshwa of the Mahrattas, who was imprisoned by the British in Tannah, from which he escaped by the aid of a Mahratta groom. This servant had to groom a horse of the officer commanding. It was picketed under the window of Trimbuk Ji's place of confinement. While grooming, he sang songs containing directions for Trimbuk Ji of the following character:—

'Behind the bush the bowmen hide,
The horse beneath the tree;
Where shall I find a knight will ride
The jungle paths with me?
There are five and fifty coursers there,
And four and fifty men,
When the fifty-fifth shall mount his steed,
The Dekhan thrives again.'

Trimbuk Ji escaped, but was recaptured and confined in the fortress of Chunar.—*Heber*, ii. p. 335.

TRIMULGHERRY, a small hamlet eight miles N. of Hyderabad in the Dekhan, near which a cantonment for European soldiers has been located.

TRIMUL NAIK or Tirumulla Nayak, of the Naik dynasty, reigned A.D. 1621 to 1657. He erected a choultry at Madura for the reception of the presiding deity of the place in its periodical migrations. It is 333 feet long by 105 feet in width. It took 22 years to erect, 1623 to 1645, and is said to have cost a kror of rupees = a million sterling.—*Fergusson*, p. 362.

TRIMURTTI, SANSK., an idol of the Hindus, of one body with three heads, is the term employed to designate the triad of gods of the Hindu mythology, Brahma, Vishnu, and Siva, whose attributes are those of the Creator, the Preserver, and the Destroyer. The consort of Brahma is Saraswati; of Vishnu, Lakshmi, Padmi, or Sri; and that of Siva is Parvati, Bhawani, or Durga. The attendant vahan or vehicle of Brahma is a Hanasa or goose, that of Vishnu is a Garuda or eagle, and Nandi or the bull pertains to Siva. Meru is the station of Brahma, the sun that of Vishnu, and Jupiter that of Siva. The symbols of the three deities are respectively Time, Water, and Fire. Their common titles, A. U. M., are, for Brahma, Parameswara; for Vishnu, Narayana; and Mahadeva for Siva. Vishnu under the figure of the sun, by the saligram and the nine avatars, while the lingam and numerous epithets are the usual figures indicating Siva. Brahma of the Hindu theology is supposed to be the analogue of the Saturn of the west, while Jupiter represents both Vishnu and Siva. The trimurtti is known in the Peninsula as mu-murti (Mur, TAM., three). In the philosophy of Hinduism, Brahma, Vishnu, and Siva, god and the world, are one, nevertheless legends relate their fights and quarrels. Many Saiva Hindus believe in the three as triune, but Vaishnava Hindus are rarely in accord in this, and the bulk of the Hindu religionists regard Siva or Iswara, Vishnu, and Brahma, or his essence Parabrahma, as distinct deities.

Of this triad, the modern Hindus scarcely recognise Brahma, who has at present not a single temple throughout all India (or at least only one), although Saraswati, his female companion, continues to be reverenced. The worship of Vishnu seems to have come from Central Asia, and that of Siva from the basin of the Lower Indus through Rajputana, and both displaced the nature-worship of the Vedas. In the existing state of Hinduism, however, every Hindu has a separate belief, and Siva, Vishnu, with their avatars and various forms, their sakti or female powers, hero-worship, the worship of deified beings, devil-worship, and the worship of the lingam, are the prevailing cults. Indra, once regarded as the king of heaven, is almost unheard of and unknown. Amongst the earliest dissenters from Indra were the Yadu race, under Krishna's influence. The reasons leading him to this are not known, but the Mahabharata makes him say to Nareda, his father, 'Why worship Indra as the supreme god? O father, we are Vaisyas, and our cattle live upon the pastures; let us therefore cease to worship Indra, and pay our devotions to the mountain Govardhana.' Up to that time it was to the heaven of Indra that the good who died proceeded. Up to then the two gods, Indra and Agni, rain and fire, were the chief deities worshipped by the Vedic Aryans.

Indra, the sovereign of the gods, was the most powerful of the Vedic deities, the god of the firmament, the hurler of the thunderbolt, who smote the rain-cloud and brought down waters, who delighted in the soma juice, in eating, in drinking wine, and in war. Indra, according to Bunsen (iii. pp. 537, 538, iv. p. 459), is the prototype of Zeus, and was a personification of ether. Soma was offered to him in sacrifice.

Agni, the personification of fire, was worshipped as the destroyer of forests, as useful in the sacrifice and in the household. 'When generated from the rubbing of sticks, the radiant Agni

bursts forth from the wood like a fleet courser.' 'When excited by the wind, he rushes amongst the trees like a bull, and consumes the forest as a raja destroys his enemies.' 'Such as thou art, Agni, men preserve thee constantly kindled in their dwellings, and offer upon thee abundant food' (Rig Veda, i. 73).

Varuna was the Vedic god of the waters, and god of the ocean, but the name was sometimes applied to the sun, and sometimes used a personification of day. As with other gods, when addressed he was regarded as supreme, and capable of forgiving sin:—

'Let me not yet, O Varuna, enter the house of clay; have mercy, Almighty, have mercy!
'If I go along trembling, like a cloud driven by the wind; have mercy, Almighty, have mercy!
. . . . . .
'Thirst came upon the worshipper, though he stood in the midst of waters; have mercy, Almighty, have mercy!'

Surya, or the sun, called also Savitra, Mitra, Aryaman, and other names, was a Vedic god, who is still adored by Brahmans and Zoroastrians. The Solar race of Kshatriya, who appear in the Ramayana, derive their origin from the sun; but in the higher spirit, the sun is regarded as divine, as pervading all things, as the soul of the world and supporter of the universe. In a verse of the Rig Veda (iii. 62 and 10), this idea is supposed to be indicated. It is 'O'm! Bhûrbhuvâssuvâhâ, O'm! Tatsa vit'hru varênnyâm, B'hargo devâssyâ dhimahi dhiyo yonaha pracho dayath. O'm! Earth, air, heaven, O'm! let us meditate on the supreme splendour of the divine Sun; may he illuminate our minds.' Brahmans regard this verse as an invocation to the several deities who are implored by the worshipper, to aid his intellect in the apprehension and adoration of God.

In connection with the sun are the twelve Aditya, sons of Aditi, the universe. In the later Vedic age they were identified with the twelve signs of the zodiac, or the sun in its twelve successive signs.

Soma, also Chandra, the moon, is chiefly celebrated in the Vedas in connection with the soma plant, but in the Mahabharata is the mythical progenitor of the great Lunar race of Bharata.

The Aswini, apparently a personification of light and moisture, as sons of the sun, also as the sun's rays, and noticed as the physicians of the gods. They are described as young and handsome, and riding on horses.

Vayu or the air, and the Maruts or winds, are personified and invoked. The Maruts are depicted as growing amongst the forests, compared to youthful warriors bearing lances on their shoulders, delighting in the soma juice like Indra, and, like him, the bestowers of benefits on their worshippers.

Ushas or the dawn, the early morning, the first pale flush of light. Ushas is compared to a mother awakening her children, to a lovely maiden awakening a sleeping world, to a young married maiden,—'like a youthful bride before her husband, thou uncovereth thy bosom with a smile.' As a goddess, she is styled the (Rig Veda, i. 123, v. 2) mighty, the giver of light; from on high she beholds all things; ever youthful, ever reviving, she comes first to the invocation.—*Rig Veda; Bunsen's Egypt.*

TRINCOMALEE, on the E. coast of Ceylon, has the finest bays and harbours in that island. It has the most secure harbours in the Indian seas, but its present importance is not great. The country around is almost deserted. The town is built on the neck of a bold peninsula on the north side of the bay, stretching between the inner and outer harbours, rising at its southern extremity into lofty precipices covered to their summits with luxurious forest. The dockyard is in lat. 8° 33′ 30″ N., and long. 81° 13′ 10″ E. Trincomalee was taken by the British in the end of 1795, but Ceylon was incorporated after the peace of Amiens, 27th March 1802. Trincomalee wood is the Berrya ammonilla, *Roxb.*—*Findlay.*

TRINGA, a genus of birds common in Europe and Asia. T. sub-arquata, the curlew sandpiper of the northern regions to beyond the equator and Australia, is very common in India.

T. canutus, the knot of the northern regions; rare in India.

T. platyrhyncha, the broad-billed sandpiper of Europe, Asia, Sumatra, Borneo, and Timor; not uncommon in India; rare in the United States of America.

T. minuta, the little stint of Europe and Asia, is very common in India.

T. Temminckii, Temminck's stint of Europe, Asia, and N. Africa; common in India.

T. alpina, or T. variabilis, the dunlin of the arctic northern regions, Japan, Timor (Temminck), Guiana; is not rare in India.

TRINGANU, a fertile and well-wooded district, containing gold and tin, between the Malacca Straits and the Gulf of Siam, containing about 50,000 souls. Tin is used as money. The raja has borne before him, as marks of royalty, six spears with gold ferules.

TRINGANY RIVER, on the east coast of the Malay Peninsula, in lat. 5° 21′ N., and long. 103° 4′ E., has a little trade in pepper and gold. The roadstead is safe from March to September.

TRINOMALY, a town in the S. Arcot district, in lat. 12° 15′ N., long. 79° 9′ E., celebrated for its beautiful and extensive pagoda, which stands to the east, and at the foot of the Trinomaly Hill. Pilgrims resort to it in November, and 78,000 persons are known to have been present. The town frequently changed hands in the 18th century. Between 1753 and 1791 it was besieged on ten separate occasions, and was six times taken, thrice by assault. From 1760 it was a British post, on which Colonel Smith fell back in 1767, as he retired through the Chengama pass before Hyder Ali and the Nizam. Here he held out till reinforced, when he signally defeated the allies. The last time it was taken was in January 1791 by Tipu. It submitted unconditionally to Tipu, but the devastation and outrage were horrible.

TRIONYX, a genus of reptiles of the order Chelonia and class Testudinata. T. Guntheri, *Gray*, is known; also T. Ægyptiacus, Euphraticus, and ocellatus. The following species occur in India:—

T. Sinensis, *Wiegm.*, China, Chusan, Formosa.
T. Gangeticus, *Cuv.*, Ganges, Penang.
T. Javanicus, *Sch.*, Ganges, Penang, Dekhan.
T. ornatus, *Gray*, Siam, Cambodia.
T. sub-planus, *Sch.*, Singapore, Penang.

TRIPASSOOR, a small decayed town in the Carnatic, in lat. 13° 7′ N., and long. 79° 52′ E., with a fort now in ruins. It was formerly a station for cadets, and afterwards a small number of Chelsea pensioners resided in it. It is 25 miles west of Madras. The level of the plain is 183 feet above the sea.

TRIPATUR or Tirupatur, chief town of Tirupatur taluk, Salem district, Madras, in lat. 12° 29′ 40″ N., and long. 78° 36′ 30″ E.; population (1871), 12,837. Tirupatur was captured by the British, and retaken by Hyder Ali in 1767.—*Imp. Gaz.* ix.

TRIPATTY or Tirupati, in lat. 13° 38′ N., and long. 79° 27′ 50″ E., a town, a hill, and a Hindu pagoda, 80 miles west of Madras, in the N. Arcot district. Tripatty is divided into two parts, the Upper Tripatty and the Lower Tripatty. The former is a small village, with a temple, situate on a fertile and elevated valley between two hills of moderate height. The construction of the temple above is very simple, but it is the richest shrine in Southern India. It has jewels and other things worth 50 lakhs of rupees, and in cash it has an equal amount. It is here that pilgrims of all creeds and castes flock every day from all parts of India. The number of pilgrims on ordinary days amounts to two or three hundred; but during the annual festival, forty or fifty thousand people gather together on the hill. The name of the up-hill idol is Streenivasen, and of the one below, Govindaraja Perumal. The pilgrims always first ascend to the Upper Tripatty Hill, perform their vows, and then come down, pay a visit to the idol below, and return to their homes. The principal part of the vow in the up-hill temple consists in shaving completely the heads of men and women indiscriminately. A very large part of the pilgrims who visit this place walk up the hill, but the rich go in small portable cots. The annual festival held here is very large, and to it (in 1772) is attributed the first recorded cholera epidemic in India. Up to 1843, the pagoda was under the management of the British Government, who derived a considerable revenue from the offerings. Now, however, the whole is given over to the mahant or abbot; and in 1873, at Surgeon-General Balfour's suggestion, the mahant established a dispensary at Lower Tripatty. In the year 1870, a party of police ascended the hill in search of a person accused of murder; and Mr. Gribble (Cal. Rev.) described it as a second-rate temple. The idol is of stone, about seven feet high, with four arms, holding in one right hand a chakra, and in the left a chank shell. The other right hand points to the earth, and the other left hand holds a lotus. Its early history is not known, but it is supposed to be of ancient date. Hindus visit it as pilgrims from great distances, usually in bands and of all ages under a leader, the members calling out 'Govinda,' a name of Vishnu. Offerings are made with every possible object and of every degree of value,—gems, jewels, gold and silver cloths, always the hair of the head, and from the lame a silver leg, from the blind a gold or silver eye. Its revenues are derived from offerings (kannikai), arjitum or receipts, for purifications (abishekam), offerings (naividium), and processions (wahanum), and there are villages and lands held by the officers of the temple. The chief period of pilgrimage is during the Brahmantsowin, or legendary nine days' celebration of the idol's nuptials with Padmavati, daughter of a king.

TRIPHASIA TRIFOLIATA. *D. C.*

T. aurantiola, *Lour.*	L. diacantha, *D. C.*
Limonia trifoliata, *Linn.*	
China naringi, . BENG.	Manilla lime-berry, . ENG.
China orange, . . . ENG.	

A very handsome shrub, with middle-sized, white, fragrant flowers, and a bright-red, pleasant fruit, like an orange in miniature; often found in Chinese preserves. Worth cultivation for the exquisite fragrance of its flowers. Its fruits are small but of pleasant sweetness.

T. monophylla, *D. C.*, occurs in Timor, and a species occurs in China and Cochin-China. The genus belongs to the natural order Aurantiaceæ, and the species are found in the East Indies, Cochin-China, and China; thorny shrubs with simple or trifoliate leaves. The fruit of T. trifoliata is acid in taste, and is both preserved and eaten as a fruit.—*Mason; Voigt; Von Mueller.*

TRIPITAKA. The sacred canon of the Buddhists is called the Tripitaka, *i.e.* the three baskets. On Buddha's death, 500 of his disciples assembled in a cave near Patna, and collected his sayings. This was the first council. They chanted the lessons of their master in three great divisions,—the words of Buddha to his disciples, his code of discipline, and his system of doctrine. These became the three collections of Buddha's teaching, and the word for a Buddhist council literally means 'a singing together.' The first basket contains all that has reference to morality, or Vinaya; the second contains the Sutras, *i.e.* the discourses of Buddha; the third includes all works treating of dogmatic philosophy or metaphysics. The second and third baskets are sometimes comprehended under the general name of Dharma, or law, and it has become usual to apply to the third basket the name of Abhidharma, or bye-law. The Sutras are ascribed to Sakya Muni. They consist of ethical and philosophical dialogues by Sakya, and they make mention of the gods Narayan, Jonardhan, Shib, Brahma, Petomah, Borun (Vorun), and Songkar, other names for Shib, Kubir, Sokr or Vasob, and Vissoo Kormo. The Chinese copy of the Buddhist Tripitaka in the library of the India Office, consists of 2000 volumes. Mahinda, son of Asoka, is supposed to have carried the Attha-katta, ancient commentaries in Pali, to Ceylon, and to have translated them into Singhalese, which Buddhaghosha, about A.D. 430, retranslated into Pali. According to another account, the doctrines were first reduced to writing by the Ceylon priests during the reign of king Vartagamani, B.C. 88–76, and by a synod assembled A.D. 10–40 by the Turushka king Kanishka. For the former the language used was the vernacular, from which in the 5th century it was translated into Pali. For the latter, Sanskrit. Hardy, in his Eastern Monachism, has discussed the views held of Buddha in Ceylon. Changes must have been made very early, for eighteen heresies are deplored in the Mahawanso within two centuries from Sakya Sinha's death. In Ceylon, this faith has not been subjected to much persecution. In the 16th century, the Tamil invaders made every effort to destroy the books, but the priests sent

missions to Siam, properly ordained priests were imported from Burma, and by the 18th century Buddhism had regained its ascendency. The priests latterly have been actively diffusing a knowledge of their creed. They have printing presses, from which tracts, pamphlets, and serials issue in great numbers. They present some new and ingenious arguments, but the defiant and blasphemous expressions which they contain against the sacred name of Jehovah, are probably the most awful ever framed in human language. —*Cal. Rev.*

TRIPNO in form is similar to the horoscope of almanacs, somewhat resembling the Muhammadan Takwim. The subject is the duration of the Yoga, Nakshatra, Tithi, Wara, and other astronomical divisions of time. The object of it is devotional. —*Burton's Scinde*, p. 400.

TRIPOLI, a mineral, first brought from Tripoli and Africa. It is composed of silica, alumina, and oxide of iron, and consists almost entirely of fossil deposits of the siliceous coats of diatoms, which from their hardness form an excellent means of polishing metals, marble, glass, etc. The town of Richmond, in the United States, is built upon a stratum of these bodies twenty feet in thickness; in California and America generally, in Bohemia, throughout Europe and Africa, and in Great Britain, are found similar deposits, varying in the different species present.—*Gosse's Natural History*, p. 27.

TRIPOLY, meaning three cities, is the name of a city of Syria — Tarāblus-ush-Sham, and of a city of Barbary—Tarāblus-ul-Gharb. The latter has a spacious, safe harbour. The Syrian Tripoli is also a seaport town on the Mediterranean, on a plain at the foot of a branch of Mount Lebanon. It has the remains of buildings erected by the Crusaders, who took it A.D. 1108. It had previously been a famed seat of oriental literature. The three Syrian cities are supposed to refer to three colonies from Tyre, Sidon, and Aradus, which settled in three neighbouring places, and subsequently joined one another. The present town is built at the foot of the lowest hills of Libanus, about half an hour's distance from the sea-shore. The river Kadesha (Holy), otherwise called Nahr-Abu-Ali, flows through it, dividing the town into two equal parts, of which that to the south is the more considerable. It is enclosed by walls of no great height or strength. It is called Tarāblus-ush-Sham, or Eastern Tripoli, to distinguish it from Tripoli in Barbary, which is called Tarāblus-ul-Gharb, or Western Tripoli.—*Robinson's Travels*, ii. p. 69; *Catafago*.

TRIPUNDRA. SANSK. A triple transverse line on the forehead of the worshippers of Siva. It is made with the vibhuti or ashes taken from the fire of an Agnihotra Brahman, or they may be the ashes of burnt cow-dung from an oblation offered to the idol. See Gop Chandana; Vibhuti.

Tripura, the district of Tiperah, from Tri, three, and Pura, a town. Tripura comprises the three towns of the three maternal uncles of Ravana.

Tripurari, the same with Mahadeva.

Tripureswari, a form of Durga.

Triratna, SANSK., three precious things of the Buddhist creed, the tree, the lion, and the wheel; also the three gems, Buddha, Dharma or the Law, and Sangha, the church or clergy; also the Buddhist triad.

Trisala, wife of Siddhartha, mother of Mahavira.

Trisanku, a prince of Oudh of the Solar line, elevated to heaven during his life by the sage Visvamitra.

Trishikha, SANSK., from Tri, three, and Shikha, the ascending flame.

Trisiras, SANSK., three-headed, the name of a son of Twashtri, also a name of Kuvera, god of wealth, also the same with Cerbura.

Trisul or Triratna, a Buddhist symbol, degraded at Jagannath to an idol.—*As. Res.* ix. p. 127, xvii. p. 252, iii. p. 409.

TRISUL, a triple-peaked hill in Kamaon, on the boundary of Garhwal; the east peak is 22,342 feet above the sea; the middle peak, 23,092 feet; and the west peak, 23,382 feet.

TRISULA, the trident of Siva. It is considered to be in continual motion over the face of the universe to guard and preserve its creatures. To oppose its course would be to incur immediate death. Its motion would appear to be regular, but varying according to the days in the week. Thus on Monday and Saturday, Siva is said to hold his trident from the east. No one should, on these days, travel in that direction. It is unlucky to proceed towards the westward on Sundays and Fridays, to the northward on Tuesdays and Wednesdays, to the eastward on Saturdays and Mondays, and to the southward on Thursdays. The trisula or trident symbol of Siva was once used on a copper paisa weighing 98¼ grains, for circulation in the province of Benares only. This special emblem of Siva constituted the banner of the Bhattaraka. Varieties of the trisul, bala, or trident continued to be emblematic on the coins of the early part of the 19th century in Mathura, Jalaor, Sagar, Srinuggur, Kalpi, etc.—*Prin. Ind. Ant.*; *Wilson*. See Trident.

TRITICUM, a genus of plants belonging to the Gramineæ. Several species are extensively grown in S.E. Asia. They furnish the wheat, a seed or grain largely used for food since the most ancient times. There are numerous sorts of cultivated wheat, from which must be distinguished the three primary varieties, viz.:—

Var. a. muticum, T. hybernum, *Linn.*, the winter wheat or unbearded wheat.
Var. b. aristatum, T. æstivum, *Linn.*, the summer wheat or bearded wheat.
Var. c. adhærens, T. spelta, *L.*, wheat with fragile axis and adherent grain.

Metzger enumerates as distinct kinds of cultivated wheat, T. dicoccum, durum, monococcum, polonicum, spelta, turgidum, and vulgare.

Wheat is grown largely as a winter crop in Coimbatore, Salem, Mysore, Berar, Sind, Oudh, Rajputana, Central India, and in the Panjab plains, T. æstivum being the common species, and T. durum the more frequent about Ludhiana and Multan, of many varieties, white or red, generally bearded; but beardless wheat is common in some parts. Twelve samples of red and sixty-two of white wheat were exhibited at the Lahore Exhibition. Red wheat holds a very much lower place in the estimation of the Panjab natives, and sells at a cheaper rate, than white, the former being consumed by the poorer classes and the bulk of the population, whilst the use of the latter is restricted to men of wealth. Several varieties of white wheat are also grown. The gilgit or paighambri, a small, round, fancy

grain, is also called Mullane or Rai Munir, from the places where it was first grown. There are also daud khani, ghoni, kabr, and vadanak (kanag dagar, Shahpur), the last-named being a particularly fine large grain.

Some kinds are grown to great heights in the Himalayas, wheat being one of the chief crops up to 9500 feet on the Chenab, and, according to Dr. Cleghorn, occurring to 15,000 feet on the Sutlej, good to 11,500 feet, and grown to 13,000 feet in Ladakh. At Ambala, wheat and also barley are sometimes sown as early as August and September, so as to be in flower in December; but in this plan it is frequently killed by frost.

The various kinds of wheat have been known from a very early period, and mention is made of wheat as a food in the earliest records of the history of man. Both the Egyptians and the Jews made use of wheat as an article of diet, and this food is early mentioned in the Bible. It was also used by the Greeks and Romans, and Theophrastus and Pliny make frequent mention of it. When the fruit is ground, the testa, or seed-coat, is separated from what is called the flour. This flour consists of the powdered albumen and embryo of the seeds. The proximate vegetable principles which this flour contains are starch and gluten. The starch is a highly carbonized vegetable principle, whilst the gluten is characterized by possessing nitrogen. Foods that contain carbonaceous matters are fattening, whilst those that contain nitrogen are strengthening. It is thus that wheat-flour has come to be the staple article of diet of the finest races of men in the world. The other cereal grasses contain the same principles, but the gluten or azotized principle is not in so large a quantity as in wheat, as the following analysis of 100 parts of the organic matter of wheat, rice, and barley will show :—

Wheat, . . .	70·00 starch.	23·00 gluten.
Rice, . . .	85·07 ,,	3·60 ,,
Barley, . . .	79·00 ,,	16·00 ,,

The chemical composition of wheat greatly varies, however, according to the soil in which it is grown. In 100 parts, the following was found to be the composition of eight samples :—

	Baroach	Gujerat.		Bombay Bazar.			Madras.	Calcutta.
Moisture, . . .	12·40	10·88	13·28	13·41	13·32	12·56	10·80	11·78
Nitrogenous matter, ...	14·08	13·30	13·19	12·84	14·90	14·26	12·98	12·73
Starchy matter, .	69 78	73·23	70·87	70·99	65·84	70·26	73·51	72·58
Fatty or oily matter, ...	1·16	1·29	1·20	1·17	1·14	1·06	1·03	1·01
Mineral constituents, ...	1·98	1·30	1·25	1·59	2·10	1·86	1·08	1·90

—*Powell; Stewart; Dr. Cleghorn; Eng. Cyc.*

TRITICUM ÆSTIVUM. *Linn.* Summer wheat.

Burr, ...	ARAB.	Rozat, Zud, . .	LADAKH.
Godhama, Gono, .	BENG.	Shruk, . . .	,,
Marghoom, . .	BOMBAY.	Tokar, Tomar, .	,,
Ghawat-ghoom,	,,	Kunuk, ...	PANJ.
Gyung-sa-ba, . .	BURM.	Gandam, ...	PERS.
Siau-meh, . . .	CHIN.	Soomuna, . .	SANSK.
Kum'h, ...	EGYPT.	Kauk, Giho, . .	SIND.
Gehun, ...	HIND.	Godumbay arisi, .	TAM.
Dro, Do, Tro, To,	LADAKH.	God'humulu, . .	TEL.

This is found in the Sutlej valley between Rampur and Sungnam at an elevation of 13,000 feet; highest limit, 15,000 feet. Both bearded and awnless varieties occur; kunuk denotes the flour, not the grain. Rice is not observed above 6000 feet. This variety is cultivated in many parts of British India. Two sorts are grown in Mysore, called Hot-te godhi and Jeve godhi, the latter being covered with husks like paddy. Jeve godhi is only grown in the lands bordering on the Pennar, and the gardens in the Bangalore division. The Hot-te godhi is largely cultivated in dry lands in the Chittuldroog division, and the vicinity of Hurrihur. This is the wheat usually employed for making loaf bread. It is exported to the Neilgherries.—*Roxb.; M. E. J. R.; Cleghorn, Panjab Report; Ainslie.*

TRITICUM DURUM. *Desf.* True bearded wheat. It is grown in Switzerland, Italy, Sicily, Spain, and in the Panjab, and it is frequent about Ludhiana, Multan, etc.—*Edgeworth.*

TRITICUM HYBERNUM. *Linn.* Lammas wheat, winter wheat. Is grown in the Panjab and in the N.W. Himalaya.—*Roxb.*

TRITICUM REPENS.

Meh-huh, ... CHIN. | Couch grass, . . . ENG.

TRITRAN or Three Corners of the people of Sind, is the Katar of the Persians and Afghans. The latter people are very fond of it, especially the lower orders in the country villages.—*Burton's Scinde*, p. 294.

TRIUMFETTA ANGULATA. *Lam.*

T. rhomboidea, *Jacq.*, *Hook.*

A plant of Berar, belonging to the natural order Tiliaceæ, yields a fibre.

TRIUMFETTA LOBATA. *M'Clelland.*

Phet-wun, . . . BURM. | Po-lo-ma, . . . CHIN.
Bet-won, ... ,,

This fibrous plant is annual, and grows to a height of five or six feet. It presents a small yellow flower in December, consisting of five petals, and in February presents a small round capsule covered with stiff bristles.—*M'Clelland.*

TRIVANDRUM or Tiruvantipuram, the capital of Travancore State, in lat. 8° 29′ 3″ N., and long. 76° 59′ 9″ E. Within its fort are the residences of the maharaja and his relatives and officers; also the temple of Padmanabha (the Lotus-navelled), a name of Vishnu. The chief out of the 45 utparas (feeding-houses) maintained by the State is also at Trivandrum, and is known as the agarasala.—*Imp. Gaz.* ix.

TRIVENI, the triple braid, a name of Prayaga. It is the mystical union, at Allahabad, of the three sacred rivers, the Ganges, Jumna, and Saraswati, severally the consorts, or energies, of the three great powers, Siva, Vishnu, and Brahma. Triveni, or the three-plaited locks, is a mythological junction, a female triad, similar to that of the Trimurti of male powers. The Ganga or Ganges, Yamuna or Jumna, join near Allahabad, and the Saraswati, now a dry bed, is also supposed to join the other two underground. A Hindu dying near the imagined confluence of these three streams, or even those of the Ganga and Yamuna, attains immediate beatitude; consequently self, or self-permitted, immolations, sati, etc., were meritorious on this peculiarly holy spot. The junction of the three waters at Allahabad is a sacred prayag, and an annual mela is held in March for purposes of ablution. Junctions of any sort, especially of waters, are held sacred by Hindus, and above all, the union of these sacred rivers Ganga and Yamuna or Jumna near Allahabad, the latter river having previously received the Saraswati below Dehli, so that, in fact, all three do unite at this famed sangam or confluence. But the Hindu poet feigns a subterrene flow of

the Saraswati, and a mystical union at the sacred point, where bathing is deemed peculiarly efficacious, and where zealots are persuaded that suicide is of a most meritorious description. Major Moor once saw, at Poona, a well-modelled group in clay, where Radha's locks, tripartite, were plaited into the mystical Triveni by the amorous Krishna, who sat rapturously admiring the work of, and in, his hands. Other rivers are, however, held sacred by the Hindus, viz. the Godavery, the Sindhu or Indus, the Krishna or Kistna, and the Brahmaputra. — *Campbell; Tr. of Hind.; Cole. Myth.; Moor, Pantheon.*

TRIVENI or Tribeni, the Three Streams, is a village in the Hoogli district of Bengal, in lat. 22° 59′ 10″ N., and long. 88° 26′ 40″ E., at the junction of the Hoogli branch of the Ganges, the Saraswati, and the Jamuna. North of the Saraswati is the Tribeni ghat, a magnificent flight of steps. Tribeni was one of the four samaj or places famous for Hindu learning, the others being Nadiya, Santipur, and Guptipara. Formerly there were over 30 Sanskrit schools in Tribeni. At Tribeni, the Makara Sankranti or Uttarayan festival, the day on which the sun enters Capricorn, takes place in January, on the last day of the Hindu month of Paush, and the first day of the succeeding month of Magh. Offerings are made to progenitors, to the domestic genii, and to the universal gods. The ceremonies are performed in the house by the family priest. (1) The great bathing festival on Sangor Island is held at this time; (2) Bisuva Sankranti is held in honour of the sun at the vernal equinox, in February; (3) Varuni, the great bathing festival of Bengal, in honour of Varuna, the god of the waters, held in February or March; (4) Dasahara, held in June, in commemoration of the descent of the goddess Ganga from heaven to save the souls of the 60,000 sons of king Sagar, who were reduced to ashes for the crime of assaulting a Brahman sage; (5) Kartik, in honour of Kartikeya, son of the goddess Durga. All these gatherings are utilized for purposes of trade.

This very old place is spoken of by both Pliny and Ptolemy. It is a school of great repute for indigenous Sanskrit. The great pandit Jagganath Turkopunchanum, who was Sanskrit tutor to Sir William Jones, and who compiled the digests of Hindu laws under the patronage of Lord Cornwallis, was a native of this village.— *Statistical Account of Bengal*, iii. p. 322; *Tr. of Hind.* i. p. 16.

TRIVIKARY, a village in the South Arcot district, about 13 miles W.N.W. of Pondicherry. It has extensive fossil trees, silicified, around what seems to be a crater. About three or four miles E. and N.E. of Verdur, a village 10 miles W.N.W. of Pondicherry, are extensive fossiliferous limestone strata, containing molluscs and fishes of the Squaloid family and Placoid order. Similar strata occur at Paroor, 10 miles W. of Verdachellum, and at Ootatoor, 25 miles N.W. of Trichinopoly. The deposits at the three places, Verdur, Paroor, and Ootatoor, are connected with each other geologically. The country around Trivikary consists of a coarse sandstone, containing remains of large trunks of fossil trees, to the westward of which the primitive gneiss formation of the Peninsula appears, and to the east extensive cretaceous beds, with numerous remains of ammonites and other chambered shells which stretch for some distance towards the sea, after which the sandstone again appears, and continues until covered by the alluvial formation of the valley of the Tembakam-nala, which reaches to the sea-shore at Pondicherry. In some very well-defined sections of the sandstone rocks in deep gullies cut by the supplying streams of the Usatari tank, four miles to the east of Pondicherry, are clear indications of cretaceous fossils underlying the sandstone. The Usatari sandstone beds, instead of being under the cretaceous rocks, rest very unconformably upon them. A careful comparison between the formations at Trivikary and those at Usatari has shown that the Trivikary sandstones are identical with those at Usatari, therefore newer than the cretaceous beds, and unconformable to them.

TRI VIKRAMA, a name of Vishnu. It means he who took the three steps, and alludes to the sun's rising, culminating, and setting. See Avatar; Vamana; Vishnu.

TROCHISANDRA INDICA. *Bedd.* A very handsome, lofty tree, with a beautiful foliage. It is very abundant in the dense, moist forests of the Animallays at an elevation of 3000 to 6500 feet. It is said by the natives to yield a valuable timber. It flowers in December and January, and ripens its fruit in April and May.—*Beddome.*

TROGLODYTES. Mr. Stanley, in crossing Africa near the sources of the river Congo, came upon a country occupied by a diminutive race. The Troglodytes of Herodotus were a small-sized race of men dwelling in Ethiopia, and their food is described as that of lizards, serpents, and other reptiles; their language like the screaming of bats. Sharpe, in his History of Egypt, is of opinion that the Troglodytic Arabs held a strip of country of about four hundred miles in length on the African coast of the Red Sea, separated from Ethiopia by mountains and deserts. They were a wandering, unsettled race, described by their neighbours as savages (Diod. Sic. lib. iii. p. 33), whose wars arose for right of pasture rather than for ambition or property. They fought with slings and darts, and outran horses in their speed; they lived in caves, and killed the aged, the lame, and the sick. Other tribes, however, more civilised (Pliny, lib. xii. p. 42), afterwards traded with the Sabæans of the opposite coast, and supplied the Egyptians with the myrrh, balsam, olives, topaz, and metals which their country or their trade produced. Like their neighbours the Egyptians, the Troglodytæ worshipped images and animals, particularly the turtles peculiar to their shores, while the more civilised tribes were worshippers of one God.— *Melp.* p. 341; *Tod's Travels*, pp. 84, 85.

TROLLIUS ASIATICUS, a flowering plant of the order Ranunculaceæ, T. Europæus grows throughout the north of Europe in moist pastures in sub-alpine districts. The flowers are large and handsome. In Scotland they are called luckengowans or cabbage daisies, and are gathered on festive occasions for making garlands and decorating the cottages of the peasantry.

Trollius Chinensis, *Smith*, Kin-lien, CHIN., is the golden lotus of Chinese writers. It grows to great perfection in Tai Chau in Shen-si. It has persistent yellow flowers.—*Smith, M. M. C.*

TROMBAY, in lat. 19° 2′ N., and long. 72° 56′

E., in the Konkan, N. of Bombay. Trombay is conspicuous for the mountain called Neat's Tongue, which attains the altitude of 1000 feet. It is nearly connected with Bombay.

TROPÆOLACEÆ, the natural order of plants known as the Indian cresses, comprising genera several species of which are ornamental. The species of Tropæolum are climbing plants, T. aduncum is the hooked nasturtium, T. azureum is the purple nasturtium, the fruit of T. minus is pickled and eaten, and T. pentaphyllum and T. tricolorum are also known. T. tuberosum is cultivated in Peru for the sake of its tubers, which, though disagreeably acrid when fresh, are not amiss when cooked. After being boiled, they are allowed to freeze, and then eaten before thawing, and while crisp. T. majus, *Linn.*, the Indian cress or nasturtion, is a showy annual, flowers and leaves of which are eaten as salads, and the seeds pickled in salt and vinegar as a substitute for capers.—*R. Brown.*

TROPHIS ASPERA. *Retz.*

Achymus asper, *Soland.*	Epicarpurus orientalis, *W. Ic.*
Streblus asper, *Lour.*	
Sheora gach'h, . . BENG.	Barranki, Bari venka, TEL.
Dahya, ... HIND.	Sahadra, . . . URIYA.
Kurrera, . . . MAHR.	

This tree is very plentiful in Ganjam and Gumsur, attaining a height of 30 feet, and a circumference of 2 feet. In Gujerat the wood is reckoned of good quality for small purposes, for it will seldom square above 4 inches. It is said to be used in Ganjam for bandy wheels. Its scabrous leaves are used to polish horn and ivory, etc. The bark is used medicinally, the leaves and sap are used for wounds and for a disease of the eye termed jokia in Orissa, said to be peculiar to children. The berries are greedily eaten by birds. *Dr. Gibson; Captain Macdonald; Royle; Voigt; Ell. Fl. Andh.*

TROPIC BIRDS. Phaeton candidus, *Linn.*, is the white tropic bird, and P. phœnicurus, *Linn.*, the roseate or red-tailed tropic bird. The former has chaste and delicate satiny plumage. They are called by sailors the boatswain or straw-tails, from the two white or red projecting tail-feathers, which they name the marline-spike, and are used as ornaments in the Society Islands. The Spaniards call them rabijunco or rush-tails. They are interesting to sailors, because met with far from land, to which seamen believe they nightly return to roost. The red-tailed species is met with in the Bay of Bengal, the Indian Ocean, and throughout all the Indian-Australian tropics. The white tropic bird also occurs in the Bay of Bengal and tropical seas, and is said to breed in the Mauritius on trees. They have been seen 1000 miles from land (G. Bennett, Gather. pp. 88-91). They breed about the end of August or beginning of September; their nests are merely circular excavations. When sitting they are easily captured: and in the Mauritius and Polynesia, in the S. Pacific, the people catch them, pull out the two long tail-feathers, and then release the bird.—*Michelet on Birds; Jerdon's Birds.*

TROPIDONOTUS, a genus of innocuous snakes. Jerdon mentions T. monticolus, plumbicolor, piscator, schistosus, and stolatus. T. macrophthalmus, 39 inches long, has a large eye, is often mistaken for a cobra. T. quincunciatus, the dhone of Bengal, is very aquatic in its habits.

TROUT. A sort of carp is usually called the Himalayan trout. It has two long string-like appendages projecting on each side of the mouth. They can be caught with a hook baited with dough; the largest does not exceed 3 lbs. in weight. The flesh is soft, very pale, and almost tasteless.—*Adams.*

TRUBU, MALAY, is the roe of the Alausa troli, a fish of which the salted and dried roes form a very considerable article of trade in the western parts of the Malayan Archipelago. The fish seems to be local, and, like salmon and some other fish, to frequent rivers for the purpose of spawning. Its favourite resort is the muddy eastern coast of Sumatra, and more especially the narrow strait which divides Bancalis and some other low islands from the mainland, and into which the river of Siak disembogues. The river of Bukit-batu is a very small stream, close to the mouth of which stands the town of Bukit-batu or rock hill, which is a place of considerable trade, the grand staple being roes of the trubu fish or telur-trubu (trubu, roe, or egg). There, three or four hundred boats, with two and three men in each, often go out at a time to the fishery, which is outside the straits of the Tanjung-Jati, or teak tree promontory. The fishery of the trubu is referred to by De Barros as conducted, on the arrival of the Portuguese, just as it is at present. The rivers (of Sumatra), says he, contain a great variety of fish, and in some of them, such as that of Siaca (Siak), they catch small shads (saves), of which the people of the country use the roe only, and of these they have a greater abundance than we have of the fish themselves.—*Decade* 3, book 5, chap. i.; *Crawfurd, Dictionary*, p. 440; *Anderson's Mission*, p. 335. See Fisheries.

TRUFFLES, the Tuber cibarium, *Sibth.*, are found in the Panjab Himalaya towards Kashmir and above Kangra. Truffles are found in Europe by the aid of dogs, a few inches below the surface of the ground, in various parts of England, and on the Continent. The London supply is chiefly from Kent, Wilts, and Hants.

TSALAI. PUKHTU. A heap of stones piled over the graves of the Afghan holy men and martyrs.—*Bellew.*

TSALE or Tschalleh. TIB. Borax. Mentog, 'borax flowers,' is fine borax from Puga and Changthang, which needs no further refining.

TSAL-WEE. BURM. A chain of nobility, a badge of nobility among the Burmese, and it is supposed to be derived from the Brahmanical thread. The order consists of six classes, distinguished by the number of gold chains, united by bosses, that compose the order. 3 of fine open work is the lowest; 3 of twisted gold chain is the next; then 6, 9, and 12, the latter being the highest grade with the exception of that worn only by majesty, and which has 24 chains. The badge of the order is worn depending from the left shoulder across the breast and back under the right arm.—*Yule; Fytche*, p. 232. See Titles.

TSANDA, a goldsmith who gave Sakya the meal of rice and young pork which brought on diarrhœa, ending in death. Sakya died in a grove of sal trees (Shorea robusta) near the town of Kusinara.

TSAN-PE-NA-GO, a noble range of hills eastward from the town of Malé in Burma, which rise in bold and craggy peaks, and attain an ele-

vation of probably some 6000 feet. This range is also named Shwe-u-doung, and is sixteen miles to the westward of the ruby mines. Snow lies on them for five months in the year.—*Yule*, p. 181.

TSAN-PU or Sangpu, a river of Tibet, supposed to form the upper waters of the Brahmaputra. It rises on the northern side of the Himalayas, in about lat. 31° N., and long. 83° E., not far from the sources of the Indus and the Sutlej; thence it flows in an easterly direction through the whole length of Tibet, passing near the capital, Lhassa. The greater portion of its course has been explored. It is agreed that the Tsan-pu takes the name of the Dihang, under which appellation it enters Assam and becomes one of the three swift rivers which unite to form the Brahmaputra, in lat. 27° 50′ N., and long. 95° 50′ E.

TSAU-BWA. BURM. A chief of a clan; a lord, a ruler. The Kakhyen are divided into septs, each of which is headed by a Tsau-bwa, who is independent, except in so far as a dread of the Burman king can influence his conduct. The next in rank to the Tsau-bwa is called the Pawmyne. Both offices are hereditary. The Tsau-bwa of Ponlyne, a village to the north-east of Bhamo, was the first chief whom Major Sladen met.

TSAYA-DAU. BURM. The superior of a Buddhist monastery. Every kyoung or monastery has a tsaya-dau who regulates its affairs, and attends to the religious and moral training of its members. Over the kyoungs of a district is a gon-ok or bishop, and at Mandalay is a patriarch styled Thathana-boing, who is supreme in all religious matters. These orders have fallen into abeyance in British Burma.—*Fytche*, ii. p. 195.

TSEANG-KEUN is the highest title bestowed on the Manchu; Te-tai is the highest military title.

TSE-FOU-YOUEN-KOUEI. CHIN. A Chinese encyclopædia published under the dynasty of Song, in the year A.D. 1005.—*Huc's Christianity*, i. p. 78.

TSEH-LAN. CHIN. A species of iris. In Ho-nan in China, the rhizomes of several kinds of iris are eaten, or added to the infused tea-leaf to flavour it.—*Smith.*

TSE-TSE, a fly of Africa, the Glossina morsitans, *Westwood*, is not much larger than the common house fly, and is nearly of the same brown colour as the honey bee, with three or four yellow bars across the hind part of the body. Its alertness enables it to evade dexterously attempts to catch it by the hand. Its proboscis is a slender glossy style. Its peculiar buzz is well known to the ox, the cow, the horse, and dog, for with them its bite is death,—they waste away and die; but man, game, and all wild animals, even sucking calves, the mule, ass, and goat, are all exempt. Its object seems to be to replete itself with blood. In the ox, a few days after the bite, the eye and nose begin to run, the coat stares, a swelling appears under the jaw, and perhaps another at the navel; emaciation followed by flaccid muscles ends in death. It abounds on the banks of the Zambesi river of Africa. The Tsal-tsalya, or Abyssinian spear-fly, is mentioned in Isaiah vii. 18. It is the Tsee-tsee fly of Livingstone, the winged Tsal-tsal or spear-fly of Isaiah. It is the Zebud of the Chaldæan version of the Bible, the Zimb of the Arabian version, and the Tsal-tsalya in the Ethiopian version. The Negroes call it Tse-tse, and the Greeks give it the name of Cynomya. Nearly all the central countries of S. Africa are more or less infested with it. It usually frequents the bushes and reeds on the borders of marshes.—*David Livingstone, M.D., Travels.*

TSHAMPA, a population lying between the mouth of the Mei-kong and the frontier of Cochin-China.—*Latham.*

T'SHAT T'SIC, a Chinese festival held during the fifteen days' observance of the Shu-yee burnt-offerings for paupers. It is held on the seventh day of the seventh month, in honour of the seven stars, which the Chinese regard as goddesses, one of whom visited earth and was married to a cow-herd, with whom she lived for a time.

TSHEN, the third recorded Chinese dynasty, began B.C. 1050, lasted 269 years. The emperor Yeu-Yang began to reign B.C. 781. His sixth year was B.C. 776. Confucius lived under his dynasty, and he recorded the observations of the solar eclipses from B.C. 481 upwards to 720.

TSHEN-BYOO-SHENG. BURM. Lord of the white elephant, a title of the king of Burma.

TSIEN. CHIN. A coin called Dehos by the Tartars, and Sapek by Europeans, is the only currency of the Chinese empire. Gold and silver are never coined, but circulate in ingots of different weights. Gold-dust and leaf-gold are also in use for commercial purposes.—*Huc's Journey*, p. 63.

TSIEN TANG, a river of China. The bore or eagre on this river, according to a Chinese proverb, is one of the three wonders of the world, the other two being the demons at Tang-chan and the thunder at Lung-chan. See Bore.

TSIN, a name of the empire of China, taken from the dynasty of this name. Applied to this country, there has nearly always been some form of Sin, Chin, Sinæ, China. The region in question was known to the ancients as the land of the Seres; to the middle ages as the empire of Cathay. The name Chin has been supposed to have come to Europe through the Malays, like many another word and name connected with the trade and geography of the far east, and to have been applied by them to the great eastern monarchy, from the style of the dynasty of Tsin, which a little more than two centuries before the Christian era enjoyed a brief but very vigorous existence, uniting all the Chinese provinces under its authority, and extending its conquests far beyond those limits to the south and the west. There are, however, reasons for believing that the name of China must have been bestowed at a much earlier date, for it occurs in the laws of Menu, which assert the China race to have been degenerate Kshatriya; and the name occurs in the Mahabharata, compositions many centuries older than the imperial dynasty of Tsin. Marco Polo says, 'I shall take another occasion to establish that the statement in the laws of Menu is partially true, and that people from India passed into Shen-si, the westernmost province of China, more than one thousand years before our era, and at that time formed a state named Tsin, the same word as China.'—*Lassen*, i. p. 857; *Panthier; Marco Polo*, p. 449.

TSIN, fourth dynasty ruling in China, began

B.C. 255, and lasted to 207, 49 years. About B.C. 221, the prince of Tsin, one of the vassal states into which the till then feudally governed China had been divided, made himself sovereign of the empire, under the title of Chi-hwang, also written Chi-hoang-ti. He was a great conqueror, and was successful in opposing the inroads of the northern barbarians, the Heung-noo or Huns, one of his measures to withstand whom was the erection of the celebrated Great Wall. Prior to the emperor Chi-hoang, the country had been under numerous principalities and commonwealths, but that warrior emperor brought them all under subjection, and it is supposed to be from his time that the country was called China, from Tsin or Chin, the name of his dynasty. It was this emperor also who built the Great Wall to keep off the incursions of the Tartars. It was done by forced labour; every third labouring man was compelled to work for his bare food as a remuneration. It extends from the sea to the most westerly province of Shen-si, about 1500 miles. It was built of earth faced with brick; it crosses mountains, valleys, and rivers, and was finished in five years. Its breadth admits of six horsemen riding abreast, and it has a tower every hundred yards. It was Chi-hoang-ti who introduced yellow as the colour of the royal family's clothes. The Chin dynasty was overthrown by Linpang, of the Han province, who was the first of the Han dynasty. With the destruction of the Tsin dynasty, great injury resulted to the Chinese annals.

TS'ING-MA. CHIN. Fibre of Sida tiliæfolia, also of Boehmeria nivea.

TSING-SZE. CHIN. The third literary degree in China, meaning advanced scholar, equivalent to LL.D. The examination for this degree is held every three years at Pekin.

TSING TSING. CHIN. A Chinese salutation, meaning I pray you! I pray you! Corrupted by Europeans to Chin Chin.

TSO-GAM, a salt lake in Eastern Ladakh, Tibet, in lat. 33° 70′ N., and long. 78° 34′ E., and 14,580 feet above the sea.

TSO-KUL, or Salt Lake, in lat. 33° 33′ N., and long. 78° 44′ E., in Pankong (referred to Pangur), south of the salt lake Tso-mo-gna-la-ri, and 14,400 feet above the sea.—*Cumming.*

TSO-MAPHAN, Manasarowara lake. Gya-Tso, the great lake, the ocean.

TSO-MITBAL, a salt lake, in lat. 33° 25′ N., and long. 78° 40′ E., in Pankong, south of the salt lake Tso-mo-gna-la-ri. It is 14,167 feet above the sea.—*Schl. Herm.*

TSO-MO-GNA-LA-RI, a salt lake, in lat. 33° 39′ 8″ N., and long. 78° 38′ 5″ E., in Pankong near Takung. It is 14,010 feet above the sea. It is divided into two parts by a river delta, analogous to the lakes of Brienz and Thun in Switzerland. The two are about equal in surface, but, according to native information, they differ in height about 40 feet; the upper lake, which contains nearly fresh water, almost drinkable, being therefore 14,050 feet.—*Schl.*

TSO-MO-RI-RI, a salt lake, in lat. 32° 45′ 4″ N., and long. 78° 16′ 6″ E. (referred to Nama Bingbo, on its southern border), in Spiti. It is elevated 15,130 feet above the sea.—*Schl. Herm.*

TSONG-KHA-BA, a Buddhist priest of Tibet, born A.D. 1417, at Si-King in Tibet. In the 15th century, the Sakya priesthood, known as the Brug-pa, also Hung-Kiao or the Red Church, had introduced marriage, but Tsong-kha-ba preached the celibate views of Sakya Muni, and insisted on the adoption of yellow robes. Before his death, A.D. 1478, he was the recognised spiritual leader of the Lamaist majority, and was acknowledged by the Ming emperor, who gladly welcomed him, because the Red Hierarchy had favoured supporters of the descendants of Kublai. Tsong-kha-ba left behind him two eminent disciples, on whom he laid commands, enjoining upon them that they should be born again, generation after generation, as hubil'han, to practise the doctrines of the Great Conveyance (Ta-ch'eng), in Sanskrit Mahāyāna, the esoteric form of Buddhism. Hubil-'han, in Chinese Hwa-shen, means transformed body, transformation, re-embodiment.

The two disciples were designated respectively Dalai Lama and Panshen Lama. From that time the spiritual and a large portion of the temporal authority in Tibet, which had previously been engrossed by the Red Hierarchy, has been wielded by the successive re-embodiments of Tsong-kha-ba's disciples, whose identity, on their reappearance in human form, has been merged, according to the legends that have subsequently arisen, in the personality of the two most exalted and revered of the divinities proceeding from the essence of Buddha himself. In the senior of the two, the Dalai Lama, the Bodhisattwa Avalokiteswara (the Chinese Kwan yin), is believed to appear on earth; and in the person of the second, the Bodhisattwa Manchusri is recognised, this deity having preliminarily occupied the form, it is also fabled, of Tsong-kha-ba himself. The second in succession of the Dalai Lamas, in the course of a long career, laid the foundation of the existing hierarchical system in Tibet, establishing his seat of ecclesiastical rule at Lhassa, and organizing a body of lesser spiritual dignitaries, under the designation Hut-ukht'u, who, like the two supreme religious chiefs, were to be continued by a series of re-embodiments. Like the Dalai Lama and Panshen Lama, these spiritual chiefs of the Tibetan priesthood became popularly known as Living Buddhas, in Chinese Hwoh Fu, a term by which they are at present commonly designated. During the latter half of the 17th century, the authority of the Dalai Lama gained entire predominance throughout the greater portion of Tibet; the Gialbo, or the descendants of the ancient kings, seem to have gradually faded into insignificance, whilst the authority of the Mongol princes grew more and more direct. Already, at a somewhat earlier period, Gushi Khan, the reigning prince of the Khoshot Mongols, had supported the Dalai Lama of the period against the claims of the reigning sovereign, and had been rewarded with the title of Nomen' Han, or Prince (Khan) of the Religious Law, an equivalent of the Sanskrit Dharma Raja. By the influence of Gushi Khan, the Dalai Lama and Panshen Lama in A.D. 1642 were induced to despatch an embassy with tenders of allegiance to the Manchu sovereign, whose forces were then on the eve of effecting the overthrow of the Ming dynasty in China; and from this period relations of intimacy took their rise, developing themselves in time into the assumption, on the part of the Chinese emperors, of the sovereign tutelage of the Buddhist papacy

in Tibet. This consummation was hastened by the wars undertaken towards the close of the 17th and in the early part of the 18th centuries by the Sungar chieftains, for the subversion of the authority of the Dalai Lama. The temporal administrator who, as regent under the Dalai Lama, had long conducted the government of Tibet, with the title of Deba, ruler or chief, was invested by Kiang Hi, in A.D. 1694, with the title of Tupeh-t'eh-kwoh-wang, or king of Tibet. But the authority thus established was ere long attacked by an invasion of the Sungars; and the Chinese armies, which were despatched hereupon for the liberation of Tibet, remained as conquerors of the country.

For a time the government remained in the hands of puppet nominees of the Chinese emperor; but in 1725 an outbreak directed against one of these gave a pretext for the appointment of two High Commissioners to control the affairs of Tibet on behalf of the Chinese Government. Further attempts at revolt led, in 1750, to the entire suppression of the temporal sovereignty in Tibet, and the government of the country was placed, thenceforward, in the hands of the Dalai and Panshen Lamas, aided by a council of four laymen, entitled Kalon or Kablon, *i.e.* Ministers of State, under the direction in chief of the two Imperial Commissioners or Residents appointed from Pekin. The government has from that time forward continued to be conducted on this basis, the authority of the Chinese Government being rendered the more complete by the long minorities which are entailed at each successive re-embodiment of the two supreme ecclesiastical dignitaries.—*Mayer, Chinese Government.*

TSO-RUL, or Bitter Lake, in Ladakh, is about five miles to the north of Pankong; its waters are very bitter. It is about sixteen miles long and two broad.

TSUNG. CHIN. Any species of palm of the genera Livistonia, Chamærops, Caryota, Raphis. Tsung-tsing, a general term for several evergreen oleaceous trees on which the wax insect feeds.—*Smith.* See Wax Insect.

TSUNG-JIN-FU. CHIN. The imperial clan court, charged with the registration, payment, and jurisdiction of the imperial family. Tsung-shih, a court of justice taking notice of cases connected with the imperial family.

TSUNG LING. TIB. Literally Onion mountain, the Kara-korum or Kouen Lun mountains, which, as high as 17,000 feet, are covered with wild leeks.—*Cunningham.*

TSZE KOO. CHIN. A vegetable of China, which the people believe to be efficacious when married women desire female children.—*Gray.*

TUAR, a Rajput clan, who claim Anand Pal as one of their rajas. They were kings of Dehli while the Gahawar were rulers of Benares.

TUBA of Mindoro, or Tuac of Timor and the Moluccas, the sap of a palm, which is converted by distillation or fermentation into spirit or vinegar.

TUBA. MALAY. The seed of the Cocculus Indicus, used for stupefying and catching fish.

TUBER CIBERIUM.

Truffle, ...	ENG.	Paphor, ...	HIND.
Buinphal, ...	HIND.	Kana kachoo, . .	PANJ.

The common truffle grows in Europe, Japan, Kashmir, and Ladakh; found buried in the soil of woods, especially beech-woods, sometimes at the depth of ten or twelve inches or more. Truffle is known by its surface being warty, and of a black colour. It is one of the few species of the fungi that is an article of diet. They appear to have been used by the Greeks and Romans. The latter especially considered them a delicacy. The truffle when gathered for eating is about the size of a large walnut, and has a very peculiar smell. The flavour resembles in some measure that of the mushroom and morel.—*Eng. Cyc.; Stew.*

TUBE ROSE is called by the Malays the intriguer of the night. It emits its perfume after sunset, and in sultry evenings scintillations of electric flame.

TUEN NIN or Wa Shien, a Chinese festival held on the 28th or 29th of the 12th month, in which thanks are given to the tutelary deity of the house.

TU-FEH. CHIN. Professional robbers, now merged into the word Tae-ping.

TUHFAH. ARAB. A rarity, a curiosity.

TUK. TURK. A flag or banner. Tukluk means one provided with flags, a standard-bearer. It is the Togluk of Weil, Hammer, and others.—*P. Arminius Vambery.*

TUKHARISTAN, a province of Balkh, lying east of the city of that name, and west of the Jihun. The chief town is Talikan. It received its name from the Tukhara, a northern tribe, probably identical with the Saka, by whom Bactria was taken from the Greeks.

TUKHM. HIND., PERS. Any seed.

Tukhm balangu, Lallemantea Royleana.
Tukhm-i-bunj-i-Rumi, Hyosciamus niger.
Tukhm dhalyan, rhus, *sp.*
Tukhm khatmi, Althea rosea.
Tukhm gandah, an astringent seed from Dehli.
Tukhm khiyarain, Cucumis sativus.
Tukhm-i-kutan, linseed.
Tukhm sipidan, Sinapis Chinensis.
Tukhm khurma, kernel of Phœnix dactylifera.
Tukhm-i-balsan, Balsamodendron Gileadense.
Tukhm-i-gawah-zimij, Berberis lycium, Asiatica, aristata.
Tukhm-i-kanaucha, Salvia Moorcroftiana.
Tukhm-i-karpas, astringent and stimulating seed of a plant.
Tukhm-i-kasus, Hyosciamus niger, Polanisia viscosa.
Tukhm-i-turb, Raphanus sativus.
Tukhm-i-wasma, Indigofera tinctoria.
Tukhm-i-zard alu, Prunus Armeniaca, stones.
Tukhm malanga, Lallemantia Royleana, Salvia pumila.
Tukhm tumma, Cucumis colocynthis.

TUKI. TAM., TEL. A peacock; Diospyros ebenaster.

TUKKORAY or Zer-bum. HIND. Small kettledrums; one is called zer, the other bum.

TUKKUL, a system of temporary clearing.

TULIPA STELLATA. *Clegh.*

Lallee waroon, .	HIND.	Nulkia, ...	HIND.
Myhoula, . . .	,,	Peperi, ...	PANJ.

This tulip is abundant in the Kangra valley and the Kamaon Hills, whence its bulbs, which are edible, are exported. Also found in the Sutlej valley between Rampur and Sungnam, at an elevation of 5000 to 6000 feet.

Tulip tree of Australia is the Telopea speciosissima, the Waratah of the natives. It grows to about six feet high. Another tulip wood of Australia is Harpulia pendula, *Planch.* The tulip tree of India is the Thespesia populnea.—*Cleghorn's Panjab*, p. 68.

TULJAPUR, in the Hyderabad dominions, has a noted Hindu temple.

TULPUT. Guj. Government lands, called Khalsa in Kaira and Ahmadabad.

TULSI. In Hindu mythology, Tulsi was a disciple of Vishnu. Desiring to be his wife, she excited the jealousy of Lakshmi, by whom she was transformed into the Ocimum herb. Ram tulsi is the Ocimum gratissimum; Babuye tulsi, Ocimum pilosum, and Krishna tulsi is Ocimum sanctum; only the last and the common tulsi, O. villosum, are held to be sacred to Vishnu, and used in his worship. The tulsi plant is employed in the funeral ceremonies of the Hindus. O. album is the safed or white tulsi, and O. basilicum is the kala or black tulsi. O. sanctum is regarded as sacred, and is made into a rosary by the Vaishnava Hindus; and every Vaishnava household has a plant in its parterre, which is encircled daily in the morning and worshipped. In administering an oath to a Hindu, a few leaves of this plant, with some water from the Ganges, is held in the hollow of the hand of the deponent while the oath is being administered to him and repeated, and it is afterwards swallowed. Tulasi-ke-manke, Hind., are beads of the tulsi; Tulasi ki jar, also Tulasi ver, Tam., the root; and Tulasi patya, Mahr., is a tulsi necklace.

TULSI BAI was born at Mhysir, A.D. 1790, in the house of Ajibah, one of the Man Bhao sect. She grew up to be very beautiful, and was under the protection of a Brahman, when a Mahratta adventurer introduced her to the notice of Jeswunt Rao Holkar, maharaja of Indore. She was beautiful, handsome, and alike remarkable for her fascinating manners and quickness of intellect. Few surpassed her in fluent eloquence and her power to persuade those who approached her to promote her wishes. She quickly acquired a great influence over Jeswunt Rao, which continued until he became insane, when she was appointed regent, and, not having any children of her own, she adopted a son of the maharaja by another woman. But her cruelty, her profligate character, her appointment of her paramour Ganpat Rao to a high office, and having executed her prime minister, an old, popular, and faithful servant of the State, led to a conspiracy, and, being suspected of a desire to call in the aid of the British, the chiefs of the army caused her to be beheaded, on the morning of the 20th December 1817, on the banks of the Sipra, and her body thrown into the river. She rode with grace, and, when on horseback she was always attended by a large party of the females of the first families of the State. Tulsi Bai and Ganpat Rao had been inclined to the British alliance, but Roshan Beg at the head of the disciplined brigades, and Ram Din who commanded the Mahratta horse, were perseveringly urging hostilities. On the 19th December 1817, Ganpat Rao and Tulsi Bai were seized. Ganpat Rao was imprisoned, and the following morning Tulsi Bai was beheaded. Next day Ganpat Rao and Tantia Jog were engaged against the British in the battle of Mahidpur, on the 21st December 1817.—*Malcolm's Central India; Elphinstone's India.*

TULSI DAS, a celebrated Hindu writer, who died at Benares in A.D. 1625. He was a follower of Ramanand, and wrote the Ramayana in Hindi, which the Oudh Rajput and the military Brahman accept as a religious book.—*Ough.* p. 118.

TULSIPUR, a pargana in the Gonda district of Oudh, bounded on the north by the lower range of the Himalayas. All along the northern hills stretches the reserved Government forest, which is succeeded by a strip of undulating ground intersected by numerous hill torrents. The soil is fertilized by leaf-mould washed down from the forests, but the climate of this tract is very unhealthy. The most singular tribe in the pargana are the Tharu, with flat faces, scanty beards, and high cheek-bones. They claim descent from the Rajputs of Chitore, and with the advance of regular castes they retire farther northwards into the recesses of the forests. They are rapidly decreasing in number by emigration into Nepal, and now amount to barely 3000.—*Imp. Gaz.*

TULUKAN. Tam. Tulukkar, Maleal. A Muhammadan; a dialectal variation from Turka.

TULUVA, an ancient dominion of Southern India, lying between the Western Ghats and the sea, and between the Kalyanapuri and Chandragiri rivers; lat. 12° 27′ to 13° 15′ N., and long. 74° 45′ to 75° 30′ E., with a coast-line of about 80 miles. It is now merely a linguistic division of that part of British India. Tulu is spoken by about 446,011 inhabitants of the tract described above, the centre of which is Mangalore. It is considered one of the six cultivated Dravidian languages, though it has no literature, and is written either in the Malealam or the Canarese character. Tulu has been to a great extent displaced by Canarese, the language of the conquering power about the 15th century. It now prevails, though not exclusively, from the north border of Malabar (Kavai), where it is much mixed with Malealam, to Udapi in the north. Mangalore, Mulki, and Udapi are the chief places where it is spoken. It is a dialect of the Canarese, and closely allied to the Toda, Badaga, and Coorg dialects. Malealam is a dialect of Tamil. By dialect is here meant that many centuries ago Tulu was the same as Canarese, and Malealam the same as Tamil. Tulu, Toda, Badaga, and Coorgi are far more closely allied to Canarese, and Malealam to Tamil, than Canarese, Tamil, and Telugu are to one another.

The Tulu people are part of the Dravidian race. The law of succession prevailing amongst them is called Aliya Santana. This is in force amongst the Sudra tribes, and a tribe that follows it is probably Tulu. The race does not include Brahmans or low castes, who are mostly immigrants from the other parts of S. India, though in some cases they have imitated the Aliya Santana custom.

In S. Malabar descent to sons is the law; but in N. Malabar, amongst the Nair, the artisan castes, carpenter, brass-smith, blacksmith, and goldsmith, also the Tiar, who are toddy-drawers, and the Mukwa, fishermen, are all polyandrists, and descent of property goes in the female line. In N. Malabar this law of descent is called Maruma-katayam, and the Muhammadan Moplah has conformed to this usage. In Canara a similar law, called Aliya Santana, or nephew inheritance, prevails, and is in practice more strictly carried out than in N. Malabar. In N. Malabar the adherents to Maruma-katayam form united family communities termed Tarwaad. The senior member of whatsoever branch is the head of the family, and is termed Karnaven; the other mem-

bers are styled Anandraver. The remotest member is acknowledged as one of the family, and entitled to maintenance if living under subordination to the head of the family, and taking part in their religious observances. For the women there is nothing analogous to the state of widowhood as existing elsewhere. Whether in alliance with men or not, they reside in their own families. The Nair marries before he is ten years of age, but though he supports he never associates with his wife, who receives at her pleasure any caste men.—*Imp. Gaz.*

TUM, a weight in Mysore of 32 lbs., 2 irase.

TUMAN, in the Mongol language, signifies ten thousand. It was borrowed by the Persians and Arabs, and with them means a weight or sum of money, originally equal to ten thousand mithkals or Arab drachms of silver. In the year 1871 a tuman of Isfahan was equal to five rupees of British India.—*Yule, Cathay*, p. 117.

TUMAN of the Baluch, a village of tents. In Pushtu, a tribe.

TUMBA TREE BARK was used by the Juang women as a loin-covering.

TUMBIYA. HIND. A drinking-cup shaped like the gourd of this name; a vessel used in cupping.

TUMBUDRA, a river of the Peninsula of India formed by the junction of the two rivers Tunga and Bhudra. Both rise near the S.W. frontier of Mysore, on the eastern slopes of the high range of hills which border on South Canara. Their junction takes place in lat. 14° N., and long. 75° 43′ E., in Mysore, in front of the Brahman village of Kudali in Shimoga district. The total length of the Tumbudra is about 400 miles. The maximum flood discharge at Hurrihur is calculated at 207,000 cubic feet of water per second, the ordinary discharge at 30,000 cubic feet.—*Imp. Gaz.*

TUMBURA. HIND. A sitar (guitar) having catgut strings instead of wire.

TUMBURU. HIND. A celestial musician.

TUMIEN or Ta-men. BURM. The silk petticoat of the Talaing women. It is of bright hues.

TUMKEE, a small circular brass plate, played on by striking it with a piece of wood having a knob at the end.

TUMKOOR, a small village, the chief town of a district in the Nundidrug division of the Mysore kingdom, 44 miles from Bangalore, in lat. 13° 20′ N., and long. 77° 9′ E.

TUMMANUI, a Tamil book on omens, on divination by sneezing, crows, owls, asses, lizards. The Tamil people are great slaves to omens.

TUMMI. TEL. Leucas cephalotes. *Spreng.*; the Phlomis cephalotes of Roxburgh. The leaves are eaten; the flowers are sacred to Siva, and are offered in his temples. But there are many plants to which the term Tummi is indiscriminately applied.

TUMONGONG, amongst the Malays, a high officer of state, to whom the superintendence of internal police matters is entrusted. A hereditary elective officer of Johore.—*Journ. Ind. Arch.* p. 568.

TUMULUS. Tumuli are met with in Wales, Scotland, Ireland, France, Sweden, Russia, Tartary, and Africa. Those in Ireland and in the plain of Troy are precisely similar to others of the United States. In America they are scattered in profusion from Lake Erie to the Gulf of Mexico, and are found in Texas, New Mexico, and S. America; other antiquities also are found in the valley of the Mississippi. Tumuli are not numerous in Ohio, but are found in Kentucky, and more commonly in Tennessee and Mississippi. One of the largest is at Cahokia in Illinois, being a parallelogram 235 yards long by 170 broad, and 90 feet high. Cairns and tumuli are found on the peaks of the Neilgherries. They contain agricultural implements; and iron spearheads, bells, and sepulchral urns, with figures of coiled snakes, tigers, elephants, dogs, and birds, sickles and gold rings, have been found buried under the piles of stones. It is supposed that the Kurumbar race formerly interred in cairns.

Over vast wildernesses in the northern regions of Asia, along the banks of the Irtish, and beyond the remote Yenesi, innumerable tumuli are scattered, containing the remains of ancient art and long extinct races of men. Implements of silver, gold, and copper, girdles of the precious metals, bracelets decked with pearls, fragments of porcelain, have surprised the travellers who have seen a few of the tumuli excavated. Similar tumuli, spread over the north of Europe, contain the remains either of the same people or of races more barbarous than the Asiatics. Hundreds of these have been rifled by treasure-hunters, or by mere antiquaries little more enlightened, who have sought to make collections of curiosities without any view to promote science or history. See Barrow; Cairn; Cromlech; St'hupa; Tope.

TUNAOLI, a tribe of the Peshawur valley, who claim descent from the khalif Abbas.

TUNGA, river in Mysore, which unites with the Bhudra to form the Tumbudra. It rises beneath the peak of Gangamula in the Western Ghats, not far from the source of the Bhudra in Kadur district. The two rivers unite near Shimoga.

TUNGANI, a race of military settlers who came originally with conquerors from the west of Asia, and settled down in the country of Yarkand.—*Cayley.*

TUNG CHI, emperor of China, died from smallpox without issue, 12th January 1875.

TUNG-JIN-TANG. CHIN. Hall of united benevolence in Shanghai.

TUNG-SHU. CHIN. Several trees yielding wood-oils are so named, such as the Elæococca verrucosa, E. vernicia, and the Paulownia imperialis.—*H. and S.; Smith, M. M. C.*

TUNG-SI-LING, the eastern and western hills of China, the site of the imperial mausolea, those of the Manchu emperor T'ai Tsung, A.D. 1627-1643; Shun Che, 1644-1661; empress Shun Che; King Ling, 1662-1722; and others. —*Mayer's Chinese Government.*

TUNGUS, a general name applied to a population common to a vast area in Siberia and China. Their physiognomy connects it with the tribes of Northern Asia in general, and their language forms a transition between the monosyllabic and agglutinate forms of speech. These tribes under Chinese rule, in Manchuria, on the watershed of the Amur or Saghalin, are termed Manchu, and the Tungus, under the name Manchu, constitute the dominant population of China itself. The Manchu proper have a literature with an alphabet modified from the Mongol. They are agricultural

and industrial. With two exceptions, the tribes of the Amur belong to the Tunguzian stock. The language of the Gilyak, on the Lower Amur, differs from the Tunguzian dialects along the river, but the features of these Gilyak are still Mongol; they have small obliquely-set eyes, prominent cheek-bones, and scanty beards. With the Aino on Saghalin, the language differs both from the Tunguzian and Gilyak. Their features are decidedly not Mongol, and they are distinguished by a great profusion of hair. The Tunguzian tribes either are nomades, keeping herds of reindeer or horses, or they subsist upon the produce of their fisheries. The reindeer Tunguzians are called Oronchon or Oroke, a word signifying reindeer-keepers, and are met with on the Upper Amur and on Saghalin, and there is one tribe along the sea-coast still called Orochi or Orochon. The Manyarg, and the kindred Birar and Solon on the Nonni, who occupy the vast prairies above the Bureya mountains, keep large herds of horses. The Goldi, Olcha (Mangun), Gilyak, Orochi of the sea-coast, and Aino are fishermen and hunters; and the Goldi, especially those settled on the Sungari, cultivate; but the Manchu and Chinese, and the Daurian living amongst them, on the Middle Amur, till the ground to a larger extent.

Oronchon of the Upper Amur,	260
Manyarg and Birar,	3000
Daurian, etc.,	2000
Goldi on the Amur and Usuri,	3560
Olcha (Mangun) on the Amur,	1100
Negidal and Kile (Sanager),	1000
Orochi of the sea-coast,	1000
Oroke on Saghalin,	1000
Gilyak on Lower Amur and Saghalin,	8180
Aino on Northern Saghalin,	1000
Chinese on the Usuri, etc.,	1400

—*Ravenstein's Russians on the Amur; Latham.*

TUNIA JUM MAHALS, a forest tract in the hills of the Chittagong district, which the Chukma race occupy along with Mug, Reang, and Tiperah races, all more or less nomadic. Some one of these wild races till lately performed human sacrifices annually, and in the year 1852 several persons were tried for murder by sacrificing. The place of sacrifice was a cleared district in the jungle, and staked round with bamboos about 6 feet high. The sacrificial pole was a 'Phula bans' bamboo, scraped and stripped at the edges, the hanging strips giving a rude notion of ornament. During the celebration of these sacrifices at Agartollah, a gun was fired every evening at sunset, when every person hurried to his home.

TUNICATA, the Tunicaries, class VI. of the mollusca, viz.:—

Fam. I. Ascidiadæ.
Gen. Molgula.
Cynthia.
Pelonæa.
Chelyosma.
Poltenia.
Fam. II. Clavellinidæ.
Gen. Clavellina.
Perophora.
Fam. III. Botryllidæ.
Gen. Botryllus.
Botryllioides.
Didemnium.
Eucoelium.
Distomus.
Diazona.
Aplidium.
Polyclinum.
Parascidium.
Armoræcium.
Synœcium.
Sigillina.
Fam. IV. Pyrosomidæ.
Gen. Pyrosoma.
Fam. V. Salpidæ.
Gen. Salpa.
Doliolum.
Appendicularia.

TUNKI. HIND. A very thin chapatti, or flour scone, or cake; or large wafer made with butter.

TUNKRA, a pass in Sikkim, in lat. 27° 38′ N., and long. 88° 56′ E. Its crest is 16,100 feet above the sea. The ascent on north-west side, gradual, is over a snow-bed and glacier; descent on north-east steep, but grassy.

TUN-SURANA. BURM. In Burmese Buddhism, the three most precious gems, Buddha, the sacred books, and the priesthood. They are regarded as the three refuges, viz. 'I take refuge in Buddha; I take refuge in the law; I take refuge in the associated priesthood.' A novice entering a kyoung repeats these three, also the ten obligations. See Triad.

TUOOZ. ARAB. Having recourse to God against evil.

TUPAIA, a genus of the mammalia, insect eaters. They closely resemble squirrels, are almost confined to the Malay Islands, as also are Ptilocerus Lowii of Borneo, and Gymnurus Rafflesii.

Tupaia Elliotti, *Blyth*, the Madras tree shrew, occurs in the hills west of Madras, and in Matheran. Male, above reddish, brown inclining to olivaceous grey on the head, limbs, sides, and tail; the hairs grizzled red and brown or olive-grey and brown. Chin, throat, breast, and lower parts yellowish-white, continued along the underside of the tail, and a rudimentary streak of the same on each side of the neck, reaching to the shoulder. Ears oval, large; eyes large, dark-brown; snout elongated. Length, 14½ inches, of which tail 7½. Native name, Karri.

Tupaia ferruginea, *Blyth*, of Arakan and the Malay Peninsula, is insectivorous and frugivorous. It dwells in rudely-constructed lairs in the highest branches of trees; it is very agile, and makes enormous bounds.

Tupaia Javanica occurs in Java. T. murina occurs in Borneo. T. Peguana, the Sikkim tree shrew, occurs in Pegu. T. tana occurs in Sumatra. —*Blyth; Jerdon*, p. 66; *Wallace*, p. 141.

TU-PEH-TEH, also Tu-Bod, names of Tibet.

TUPHA. SANSK. A college.

TUPHA. TURK. A horse tail; the tails of the horse and of the yak, used as standards amongst the Turkoman. Tupha, Tugha, or Tau, according to Remusat, is the Turkish name of the horse-tail standard, but is applied also by the Chinese to the yak-tail, which respectively with those nations mark the supreme military command.—*Rech. sur les Langues Tartares*, p. 303; *D'Ohsson*, i. p. 40, *in Yule's Cathay*, i. p. 174.

TUPOZ, in Manilla, the intermediate layers of the stem of the wild plantain, Musa textilis, of which are made web cloths and gauzes four yards long, of different degrees of fineness.—*Simmonds.*

TUPPA, a musical measure which belongs to the North-West of India, being indigenous as far as the Indus and the countries watered by its tributaries, and common in Rajasthan, but the prefix of Panjabi shows its origin. Colonel Tod says he has listened at Caen to the viola or hurdy-gurdy, till he could have fancied himself in Mewar. —*Tod's Rajasthan*, i. p. 648.

TUPPA, amongst the Bhot race, a probationer for the Buddhist religion of Tibet. The ordinary monk or priest in Tibet is the Gylong, above whom are Lamas or presidents, and below whom are the Tohba and Tuppa. The Tuppa is a probationer who is admitted into the establishment to which he would attach himself at the age of 8 or 10, and receives instruction accordingly. At 15 he becomes a Tohba, and at 24 a Gylong, provided

his acquirements be satisfactory. There are two sects, the Gyllupka, who dress in yellow, and the Shammar, in red, the Shammar Gylongs being allowed to marry. The Bhot of the Tibetans have been extending westward. As a general rule, the Himalayas divide Hindustan from Bhotland, but there are Bhot in several parts south of the crest of those mighty mountains in Garhwal and Kamaon.

TUR, a small seaport on the coast of the Gulf of Suez, inhabited by Arabs. To the north of the town, at the foot of the low hills, Jabl Hamām and Sidna Musa, are warm sulphur springs, 92° to 94° Fahr. The Bell mountain, Jabl Nakous, is about 12 miles from Tur. The Wadi Hebran and Wadi-us-Slah lead from Tur to the monastery of St. Catherine.

TURAN, the name of a region bordering on Iran, in the north and north-east, which in the remotest times was inhabited by a race who are now spread into different parts of the world, and are known to ethnologists as Turanians and Mongolians. Turan and Turanian are terms of Persian origin. In their simple system of ethnography, the inhabitants of Central Asia divide all the world between two races, Iran and Turan, Iran or Irani meaning themselves, and Turani meaning everybody else; or, as they express it, Iran and an-Iran, Aryan and non-Aryan. This was the practice also of the Jews, and of the Greeks and Romans, who classed all other races as Gentiles and barbarians, as the Hindus now reckon all non-Hindus as M'hlecha, and as the Chinese, who place all outsiders as Fan. In the Zend books, the Turanians are styled the foes or antagonists of the Aryans. They are Firdusi's Turiya. Turvasu means one who possesses the treasures of his enemy, and Turvasa, one who conquers when he pleases.

According to Cuvier, the probable cradle of the Mongolian or Japhetic race is the Altai mountains, whence they have spread over Northern and Central Asia, southwards as far as Hindustan north of the Ganges, and eastwardly to the Eastern Ocean, where the race is distinguishable in the Japanese, the Corean people, and those of Siberia, and their divisions are known in modern times as Tungus, Turk, Mongol, and Fin.

Chevalier Bunsen observes (Report Brit. Ass. 1847) that the researches of our days have made it more than probable that the Tartar, Manchu, and Tungus belong to one great stock; that the Turkoman, Chud, Fin, Lap, and Magyar (Hungarian) present another stock closely united; and that both these families were originally connected with each other. He proposed to call this whole group of their languages the Turanian, and in lieu of Indo-Germanic or Indo-European, he proposed the term Iranian, following the antithesis of Iran and Turan established by Heeren and Carl Ritter. In the vast region extending from the chain of the Altai to that of the Himalaya, are the pasture lands where, during immemorial ages, the nomadic tribes of High Asia have fed their flocks and multiplied those hordes which from time to time descended in immense swarms on the fertile regions of Asia and of Europe. Perhaps the earliest of these invasions of the civilised world was that of the Hiong-nu, expelled from the borders of China by the powerful dynasty of the Han. These were the people who, after their inroad on the Gothic empire of Hermanrich, made their way, under Etzel or Attila, into the heart of France. Hordes from the same regions, under Toghrul Beg, and Seljuk, and Mahmud of Ghazni, and Chengiz, and Timur, and Othman, overwhelmed the khalifat and the empires of China, of Byzantium, and of Hindustan; and lineal descendants of the shepherds of High Asia still sit on the throne of Cyrus, and on that of the Great Constantine; while the branch which ruled in India under the title known to Europe as the Great Moghul, closed in 1862 by the death at Rangoon of the last emperor of Dehli, then a convict prisoner of the British. Until checked by the British in India and by the Russians in Central Asia, the race was predominant over the whole of the countries between China and the Mediterranean, and from the Caspian southwards to the Ganges and the Persian Gulf. But they seemed destined to partake only by conquest in the higher civilisation of the surrounding nations, older or younger ones, the Chinese presenting the one extreme, the Iranians the other. Little disposed to learn from them as neighbours or subjects, they become more or less civilised by being their masters. They cannot resist the inward force of the civilisation of their subjects, although they repel it as an outward power.

The Turanian people, but particularly the Turko-Tartar tribes, made themselves renowned in antiquity by their martial disposition, and by the wild, intractable rudeness of their habits, and they have appeared amongst surrounding nations as spoilers, destroyers, and plunderers. The Aryan tendency is to form national and political communities, marry one wife, and worship one supreme and spiritual deity. The Turanian tendency is to have little national or political cohesion, to marry one or more wives without much sentiment, and worship gods and heroes without much idea of a spiritual existence beyond that implied in the notion of ghosts and demons. Turanian races have a longing for spiritual excitements. Perhaps as the vividness of religious faith is common amongst mountaineers, the simple pastoral and secluded life common to most of the Turanian tribes may impart a tendency to reverie and visionary absorption. The great horse sacrifice is allowed to have been originally Turanian, whether derived directly from the Sakæ, or indirectly from Persia and Media, where the white horse was an important element in a campaign of Cyrus; and Mr. Atkinson found traces of this sacrifice still lingering on the southern borders of Siberia. See Aswa Medha.

Mr. Hodgson considers the Tamil, Tibetan, Indo-Chinese, Tungus, Chinese, Mongol, and Turk as so many branches of the Turanian family; and he regards the aborigines of British India as Northmen of the Scythic stem, but he remains undecided whether they owe their physiognomy to the Tungus, the Mongol, or the Turk branch of the Tartars or Scythians, and whether they immigrated from beyond the Himalayas at one period and at one point, or at several periods and at as many points. But all writers are of opinion that when the Aryans entered India, they found the country occupied by prior Scythic races, to whom their writers apply such contemptuous expressions as Dasya, M'hlecha, etc. These prior races seem

to have been pushed largely out of Northern India into and through the Vindhya mountains into the Peninsula of India and Ceylon, where their idioms, the Tamil, Telugu, Malealam, and Karnatica, are sister dialects of one speech; and Dr. Pritchard concurs in opinion with Professor Rask, who regards the languages of the mountain tribes of India, the Bhil, the Gond, the Toda, and others, as also of the Tartar stock, and mentions that some curious analogies have been observed between the Tamil and other dialects of the Peninsula and the languages of Australia.

Mr. Logan, however, who had great opportunities of contrasting and comparing the Dravidians from various parts of India, remarks that, physically, the population of Southern India is one of the most variable and mixed which any ethnic province displays. A glance at a considerable number of Kling (Teling) and Tamilar of different castes and occupations, shows that the varieties when compared with those of similar assemblages of men of other races, such as Europeans, Ultra-Indians, or Indonesians (including Negroes in the last two cases), are too great to allow of their being referred to a single race of pure blood. Some are exceedingly Iranian, some are Semitic, others Australian, some remind us of Egyptians, while others again have Malaya, Polynesian, and even Simang and Papuan features. This varied character of the races of the south of the Peninsula may be seen daily in Madras, to which all the races from the south of India resort.

Turanians now occupy Central and Northern Asia, and include, according to modern ethnology, the Tartar, Fin, Turk, and Magyar. Turanian languages are scattered over the whole of the northern part of Europe and Asia, from China to the Pyrenees, and from Cape Comorin across the Caucasus to Lapland. The Hungarian, Lapponian, and Finnish dialects are now classed as members of the great Turanian or Tartar family of tongues, which is spoken by all the tribes from the Himalaya to Okotsk and to Lapland, and includes the Hungarian, Crimean, and Turkish tongues. Farrar states that the terms Turanian, Nomadic, or Allophyllon of Pritchard, are names applied to all languages not belonging to the Aryan or Semitic, and which comprise all languages spoken in Asia or Europe not included under the Aryan and Semitic families, with the exception of the Chinese and its dialects. These are Tungus, Mongol, Turki, Samoyede, and Fin. The writers on this class are Rask, Klaproth, Schult, Castren, and Muller. The Turanian languages occupy by far the largest portion of the earth, viz. all but parts of India, Arabia, Asia Minor, and Europe; but except agglutination, there is not a single positive principle which can be proved to pervade them all.

The most characteristic feature of the Turanian languages is what has been called agglutination, or 'glueing together;' and what distinguishes the Turanian languages is, that in them the conjugation and declension can still be taken to pieces; and although the terminations have by no means always retained their significative power as independent words, they are felt as modificatory syllables.

The Turanian family of languages consists of two great divisions, the Northern and the Southern. The northern is sometimes called the Ural-Altaic or Ugro-Tartaric, and it is divided into five sections, the Tungusic, Mongolic, Turkic, Finnic, and Samoyedic.

The southern, which occupies the south of Asia, is divided into four classes, the Tamilic, the Gangetic (Trans-Himalayan and Sub-Himalayan), the Lohitic, the Taic, and the Malaic. These two divisions comprehend very nearly all the languages of Asia, with the exception of Chinese, which, together with its neighbouring dialects, forms the only representative of radical or monosyllabic speech. Japanese, the language of Corea, of the Koriakes, the Kamtskadales, and the numerous dialects of the Caucasus, etc., remain unclassed.

The Tungusic section of the northern branch extends from China northward to Siberia, and westward to 113°, where the river Tunguska partly marks its frontier. The Tungusic tribes in Siberia are under Russian sway. Other Tungusic tribes belong to the Chinese empire, and are known by the name of Manchu, a term adopted after they had conquered China in 1644, and founded the present imperial dynasty.

The original seats of the people who speak Mongolic dialects lie near the Lake Baikal, and in the eastern parts of Siberia, where we find them as early as the 9th century after Christ. They were divided into three classes, the Mongol proper, the Buriat, and the Olot or Kalmuk. Chengiz Khan (1227) united them into a nation, and founded the Mongolian empire, which included, however, not only Mongolic, but Tungusic and Turkic, commonly called Tataric, tribes.

In India, there are three or four distinct branches of this family of languages. In the north are the Himalayan dialects, of tribes from Upper and Lower Kanawar, on the Sutlej, to the Bhutani of the extreme east. Then we have the Lohitic class, comprising, with the Burmese and others of the Eastern Peninsula, the dialects of the Naga and Mikir tribes in Assam, and of the Bodo, Kachari, Kuki, and Garo in Eastern Bengal. Nearly related to this class is the Kol or Munda family, including the Kol, Santal, and Bhumij of Singbhum and Western Bengal, and the Munda of Chutia Nagpur. The fourth class is the Tamil or Dravidian, to which belong the Brahui of Baluchistan, the Gondi, the Tuluva of Canara, the Karnata of the S. Mahratta country, the Toda of the Neilgherries, the Malealam of Travancore, the Tamil, and Telugu. The Kur or Muasi, and the Korku in Hoshangabad, and westward in the forests on the Tapti and Narmada, until they come in contact with the Bhil of the Vindhya Hills, and the Nahal of Kandesh, belong to this Kol family; indeed, Mr. Hyslop held that the word Kur is identical with Kol.

According to Pritchard, the idiom of the islands comprised in the empire of Niphon, as well as that of the independent Liu-kiu Archipelago, bears some signs of affinity to those of the Ugro-Tartarian nations. Mr. Norris had assured him that the principle of vocalic harmony and other phenomena of the Tartar languages prevail in the idiom of the Japanese and Liu-kiu Islands. He also observed analogies between the Tamilian and other dialects of the Dekhan and the languages of Australia, with which we have obtained some acquaintance through the labours of Mr. Threlkeld and several other missionaries, and from the able researches of Captain Gray. Turkish is a Turanian dialect. Its grammar is purely Tataric or Turanian.

The Turks, however, possessed a small literature and narrow civilisation before they were converted to Muhammadanism; but as the language of Mahomed was Arabic, a branch of the Semitic family closely allied to Hebrew and Syriac, this, together with the Koran and their law and religion, the Turks learned from the Arabs, along with many of the arts and sciences connected with a more advanced stage of civilisation. Arabic became to the Turks what Latin was to the Germans during the middle ages; and there is hardly a word in the higher intellectual terminology of Arabic that might not be used, more or less naturally, by a writer in Turkish.—*M. De Guignes; Sir W. Jones' Works*, iii. p. 72; *Report Brit. Assoc.; Wh. H.; Pritchard; Bunsen; Muller; Logan, in J. Ind. Arch.; Hyslop, Jour. Ant. Soc. Nagpur.*

TURANJABIN, Persian manna, produced on the Alhaji maurorum, in Persia, Bokhara, and Afghanistan. See Manna.

TURBAND.

Pagri, ... Hind. | Dustar, ... Hind.

The head-dress of the Muhammadans, from the two Persian words, Sir, the head, and Band, a tie. A principal site of the manufacture of cotton turbands formerly was the town of Arnee, in the Chingleput district, but they are now made at Oopada in the Rajamundry district, and also in the Madras district. A principal site of the manufacture of silk turbands was Seringapatam in Mysore. These are of a pink colour, and are sold at from 10 to 25 rupees each. Turband pieces in cotton, silk, cotton and gold, and silk and gold, are those usually manufactured. In Afghanistan, conquered people pay homage by casting their turbands at the feet of the conqueror; the chiefs of tribes often lessen the size of their turbands before appearing in the presence of their rulers. Muhammadans of British India, when in great distress or in supplication, take off their turbands, and lay their heads on the ground, or in the lap of the person before whom they appear. For a stranger to take off the turband of either a Hindu or Muhammadan, is an act of great indignity. A Muhammadan wife receives her husband, and places his turband in an honoured part of the house. An exchange of turbands is the symbol of fraternal adoption. In Turkish burial places, the tombs of men are indicated by the figure of a turband placed at the head of the grave.

TURBINELLA, a genus of gasteropodous molluscs, family Muricidæ. About 70 recent and 20 fossil species are known. T. rapa, the chank shell, is used in India as a trumpet, is sawn into rings to form bracelets, anklets. It was the war-trumpet of the ancient Hindus; and the idol of the Hindu god Vishnu holds a chank in one of his four hands.—*Tod's Rajasthan.*

TURBITH, Turpeth, or Turbud. Hind. The cortical part of the root of the Ipomœa turpethum. It is a longish root, about the thickness of the finger, resinous, heavy, of a brownish hue without, and whitish within. It is used in medicine. —*Lewis' Mat. Med.*

TURBUZ. Hind. Cucurbita citrullus, water-melon, is grown in the beds of rivers in the hot season, but may be cultivated in gardens during the rains. Its fruit is esteemed by all classes.—*Riddell.*

TURFAN, on the borders of the desert of Gobi, is the most eastern of the districts of Kashgaria. The Ush-Turfan district of Kashgaria lies N.E. of the Kashgar district. The Tian Shan mountains have for centuries maintained their character for surpassing excellence of Turfan wool.

TURI dwell in the t'huls of Dawudputra, Beejnote, Noke, Noakote, and Oodur; they own and hire out camels, but, like the Bawuri and Khengar, are great thieves, and are called bhut or evil spirits and sons of the devil.

TURI, a martial tribe occupying a portion of the valley of the river Kurm; they can muster 5500 fighting men. They repeatedly leagued with other tribes to harass the Meeranzai valley. They would sow strife among the Meeranzai people, they would harbour fugitives from either party, they would encourage all to resist the British, they would attack some villages in force; they frequently committed raids on the Bungush and Cuttack villages of the Kohat district. In August 1853, Captain Coke seized a Turi caravan on its way to the salt mines, taking the property as security for repayment of value of plundered property, and the men as hostages for their tribes. This measure was soon followed by an embassy from the tribe, and an agreement was concluded with the tribe from the commencement of 1854. The value of plundered property was made good, the prisoners were released, and five Turi men were made over to the British as hostages; but within one month the tribe again gave way to evil counsels, and in March 1854 a serious attack was made by the Turi with 2000 men (foot and horse) on a Meeranzai village.

During the wars with Kábul in 1878-1880, the Kurm valley was held by a large British force, and the Turi kept quiet. See Kurm.

TURIVA-CARAY. The great Basava or bull at Turiva-caray, in Mysore, is a single block of Karikallu or blackstone, procured from a quarry at Caddapully. This stone is an amorphous hornblende containing minute rhomboidal lamellar concretions of basaltine. It is obtained from detached blocks of stone in this quarry; the solid rock contains many finer pieces.

TURK. Among the Arabs this word has been as vaguely applied as the word Scythian was among the Greeks. Turk, applied to an Osmanli, is deemed derogative; but this name is given by the Tamil and Telugu people as the usual designation for all Muhammadans, as Turka-kara and Turka-vadu, and their language the Turka-pesh and Turka-bhasha or Turka-mata. Arabs and Persians, when alluding to their northern neighbours, always style them Turk, applying that term as loosely as Europeans do the word Tartar.

The word Turk has the same root as that of Turan, the country of the restless, horse-riding, nomade tribes, the great Turanian and Mongolian family, in contradistinction from the Aryan, Iranian, or Indo-European race, and it is derived from the root To-ar, to fly.

Vambery divides the Turk into Burut, black or pure Kirghiz; Kirghiz, properly Kazak; Kara-kalpak, Turkoman, and Uzbak.

The region inhabited by Turkish races at the present time comprises two distinct tracts of country, one stretching southwards from the icy shores of the Arctic Ocean to the Hindu Kush, the other eastwards from the Adriatic, both merging into each other in the eastern portion of

Asia, known as the desert of Gobi. The Turk in the furthest east claims relationship with his brethren in the extreme west. The simplest Turkoman is aware of the existence of kinsmen about Diarbekir.

Many of the Turk tribes of High Asia retained their pagan names when accepting Islam. Seljuk is said to have been a convert, but his sons were called Michael, Israil, Musa, and Yunus. His celebrated grandson, however, retained the name of Toghrul, and Toghrul's son was Alp Arselan. The names of most Turkish tribes and families are taken from animals: Mang-it means sick dog; Kira-it, grey dog; Oyur-at or Oir-at, grey horse; Kungr-at or Kinghur-at, chesnut horse.

Hiung-nu.—The most ancient name by which the Turk and other of the tribes of Central Asia were known to the Chinese, was Hiung-nu. These Hiung-nu founded an empire (B.C. 206) comprising a large portion of Asia west of China. Engaged in frequent wars with the Chinese, they were at last defeated in the middle of the 1st century after Christ. Thereupon they divided into a northern and southern empire; and after the Southern Hiung-nu had become subjects of China, they attacked the Northern Hiung-nu, together with the Chinese, and, driving them out of their seats between the rivers Amur and Selenga and the Altai mountains westward, they are supposed to have given the first impulse to the inroads of the barbarians into Europe. In the beginning of the 3d century, the Mongolic and Tungusic tribes, who had filled the seats of the Northern Hiung-nu, had grown so powerful as to attack the Southern Hiung-nu, and drive them from their territories. This occasioned a second migration of Asiatic tribes towards the west. Another name by which the Chinese designate these Hiung-nu or Turk tribes is Tu-kiu. This Tu-kiu is supposed to be identical with Turk; and although the tribe to which this name was given was originally but small, it began to spread in the 6th century from the Altai to the Caspian, and it was probably to them that, in 569, the emperor Justinian sent an ambassador in the person of Semarchos. The empire of the Tu-kiu was destroyed in the 8th century by the Hui-he (Chinese Kao-che). This tribe, equally of Turk origin, maintained itself for about a century, and was then conquered by the Chinese, and driven back from the northern borders of China. Part of the Hui-he occupied Tangut, and, after a second defeat by the Mongolians in 1257, the remnant proceeded still farther west, and joined the Uigur, whose tents were pitched near the towns of Turfan, Kashgar, Hamil, and Aksu. These facts, gleaned chiefly from Chinese historians, show from the very earliest times the westward tendency of the Turk nations. In 568, Turk tribes occupied the country between the Volga and the Sea of Azof, and numerous reinforcements have since strengthened their position in those parts.

Turkoman.—The northern part of Persia west of the Caspian Sea—Armenia, the south of Georgia, Shirwan, and Dagestan—harbours a Turk population, known by the general name of Turkoman. They are predatory nomades, and their arrival in these countries dates from the 11th and 12th centuries. East of the Caspian Sea, the Turkoman tribes are under command of the Uzbak khans of Khiva, Fargana, and Bokhara. They call themselves, however, not subjects but guests of these khans. Still more to the east, the Turkoman are under Chinese sovereignty, and in the south-west they reach as far as Khorasan and other provinces of Persia.

The *Uzbak*, descendants of the Hui-he and Uigur, and originally settled in the neighbourhood of the towns of Khotan, Kashgar, Turfan, and Hamil, crossed the Jaxartes (Syr-i-Darya) in the 16th century, and, after several successful campaigns, gained possession of Balkh, Kharism (Khiva), Bokhara, and Fargana. In the latter country and in Balkh they have become agricultural; but generally their life is nomadic, and too warlike to be called pastoral.

Nogai.—Another Turk tribe are the Nogai, west of the Caspian, and also north of the Black Sea. To the beginning of the 17th century they lived north-east of the Caspian, and the steppes on the left of the Irtish bore their name. Pressed by the Kalmuk, a Mongol tribe, the Nogai advanced westward as far as Astracan. Peter I. transferred them thence to the north of the Caucasian mountains, where they still graze their flocks on the shores of the Kuban and the Kama. One horde, that of Kundur, remained on the Volga, subject to the Kalmuk. Another tribe of Turk origin in the Caucasus are the Bazianes. A third Turk tribe in the Caucasus are the Kumiik, on the rivers Sunja, Aksai, and Koisu.

Bashkir.—The southern portion of the Altaic mountains has long been inhabited by the Bashkir, a race considerably mixed with Mongolic blood, savage and ignorant, subjects of Russia, and Muhammadans by faith. Their land is divided into four roads, called the roads of Siberia, of Kasan, of Nogai, and of Osa, a place on the Kama. Among the Bashkir, and in villages near Ufa, is now settled a Turk tribe, the Meschérak, who formerly lived near the Volga.

Karakalpak.—The tribes near the lake of Aral are called Karakalpak. They are subject partly to Russia, partly to the khans of Khiva.

Siberia.—The Turk of Siberia are partly original settlers who crossed the Aral and founded the khanate of Sibir, partly later colonists. Their towns are Tobolsk, Yeniseisk, and Tomsk. Separate tribes are the Uran'hat on the Chulym, and the Barabas in the steppes between the Irtish and the Ob.

In the north-east of Asia, on both sides of the river Lena, the Yakut form the most remote link in the Turkic chain of languages. Their male population has lately risen to 100,000, while in 1795 it amounted only to 50,066. Their original seats seem to have been north-west of Lake Baikal.

Southern Siberia is the mother country of the Kirghiz, one of the most numerous tribes of Turko-Tataric origin. The Kirghiz lived originally between the Ob and Yenisei, where Mongolic tribes settled among them. At the beginning of the 17th century, the Russians became acquainted with the Eastern Kirghiz, then living along the Yenisei. In 1606 they had become tributary to Russia, and, after several wars with two neighbouring tribes, they were driven more and more south-westward, till they left Siberia altogether at the beginning of the 18th century. They now live at Burut in Chinese Turkestan, together with the Kirghiz of the 'Great Horde,' near the town of Kashgar, north as far as the Irtish.

Kirghiz.—Another tribe is that of the Western Kirghiz or Kirghiz-Kazak, who are partly independent, partly tributary to Russia and China.

Of what are called the three Kirghiz hordes, from the Caspian Sea east as far as Lake Tenghiz, the Small Horde is fixed in the west, between the rivers Yemba and Aral; the Great Horde in the east; while the most powerful occupies the centre between the Sarasu and Yemba, and is called the Middle Horde. Since 1819 the Great Horde has been subject to Russia. Other Kirghiz tribes, though nominally subject to Russia, are really her most dangerous enemies.

The Turk of *Asia Minor* and Syria came from Khorasan and Eastern Persia, and are Turkomans, and remnants of the Seljuk, the rulers of Persia during the middle ages.

The *Osmanli Turk*, who form the ruling portion of the Turkish empire, have the same source. They are now scattered over the whole Turkish empire in Europe, Asia, and Africa, and their number amounts to between eleven and twelve millions. They form the landed gentry, the aristocracy and bureaucracy of Turkey; and their language, the Osmanli, is spoken by persons of rank and education, and by all Government authorities in Syria, in Egypt, at Tunis, and at Tripoli. In the southern provinces of Asiatic Russia, along the borders of the Caspian, and through the whole of Turkestan, it is the language of the people. It is heard even at the court of Teheran, and is understood by official personages in Persia. The ancestors of the Osman Turk are men as well known to European historians as Charlemagne or Alfred. It was in the year 1224 that Sulaiman Shah and his tribe, pressed by Mongolians, left Khorasan and pushed westward into Syria, Armenia, and Asia Minor. Sulaiman's son Ertoghrul aided, and then took service under, Ala-ud-Din, the Seljuk sultan of Iconium (Nicœa), and, after several successful campaigns against Greeks and Mongolians, received part of Phrygia as his own, and there founded what was afterwards to become the basis of the Osmanic empire. During the last years of the 13th century the sultans of Iconium lost their power, and their former vassals became independent sovereigns. Osman, after taking his share of the spoil in Asia, advanced through the Olympic passes into Bithynia, and was successful against the armies of the emperors of Byzantium. Osman became henceforth the national name of his people. His son Or-khan, whose capital was Prusa (Bursa), after conquering Nicomedia (1327) and Nicœa (1330), threatened the Hellespont. He took the title of padshah, and his court was called the 'High or Sublime Porte,' the Bab-ul-Makaddas. His son Sulaiman crossed the Hellespont (1357), and took possession of Gallipoli and Sestos. He thus became master of the Dardanelles. Murad I. took Adrianople (1362), made it his capital, conquered Macedonia, and, after a severe struggle, overthrew the united forces of the Slavonic races south of the Danube, the Bulgarians, Servians, and Croatians, in the battle of Kossova-polye (1389). He himself fell, but his successor Bayazet followed his course, took Thessaly, passed Thermopylæ, and devastated the Peloponnesus. The emperor of Germany, Sigismund, who advanced at the head of an army composed of French, German, and Slavonic soldiers, was defeated by Bayazet on the Danube in the battle of Nicopolis (1399). Bayazet took Bosnia, and would have taken Constantinople, had not the same Mongolians who in 1244 drove the first Turkish tribes westward into Persia, threatened again their newly-acquired possessions. Timur had grasped the reins fallen from the hands of Chengiz Khan; Bayazet was compelled to meet him, and suffered defeat (1402) in the battle of Angora (Ankyra) in Galatia. Europe now had respite, but not long. Timur died, and with him his empire fell to pieces, while the Osmanic army rallied again under Muhammad I. (1413), and re-attained its former power under Murad II. (1421). Successful in Asia, Murad sent his armies back to the Danube, and, after long-continued campaigns, and powerful resistance from the Hungarians and Slavs under Hunyad, he at last gained two decisive victories, Varna in 1444, and Kossova in 1448. Constantinople could no longer be held, and the Pope endeavoured in vain to rouse the chivalry of Western Europe to a crusade against the Turks. Muhammad II. succeeded in 1451, and on the 26th of May 1453, Constantinople, after a valiant resistance, fell, and became, as now, the capital of the Turkish empire.

In the region west of a line drawn from Constantinople to the mouth of the Gerenis Chai in Lycia, or the region of the six rivers, Bakor Chai, Gedoz Chai, Kychyk and Bojzk Menderes, Gerenis Chai, and Godchai Chai, the population is about 1,500,000, of whom 600,000 are Turks, 300,000 nomade mountain Yoruks, 400,000 Greeks, 40,000 Chepis (wood-hewers and charcoal-burners, without any religion, perhaps the remains of the aborigines of the country), 60,000 Armenians, 40,000 Jews, 15,000 Catholics, 10,000 to 15,000 gypsies, Arabs, Bulgars, Croats, etc., and 4000 to 5000 Europeans other than Greeks. These Turks seldom speak any other tongue but their own. Their chief occupations are agriculture, cattle rearing, carpet-weaving, saddlery, and other small industries, and they greatly delight to act as caravan guides. The strict seclusion of the women demanded by Islamism seriously hinders them from helping the men in their business. On them alone falls the whole burden of military service. At 18 years they marry, and at 21 or 22 they are taken as soldiers and separated from wedlock for long years. The women become immoral, and these are the chief causes of the gradual extinction of the race. The Greeks have got possession of nearly all the trade and shipping. The Greeks are energetic, diligent, and eager to learn. The Greeks are preferred as physicians, lawyers, teachers, and also as traders and workmen. They are intolerant, like the Turks, but without any inner religious feeling. Yet many Slavs, mostly Bulgars and Wallachs, join their Church, and soon assume the Greek language and Greek names, and become in all respects Greeks.

Tajak.—The modern distinction of Turk and Tajak, which in its application denotes men of military and men of civil pursuits, has existed from the most early ages in this extended country.

Uigur.—According to Vambery, the Uigur are the most ancient of the Turk tribes, and formerly inhabited a part of Chinese Tartary which is now occupied by a mixed population of Turk, Mongol, and Kalmuk. They were the first who reduced

the Turki language to writing, borrowing the characters from the Nestorian Christians, who came to their country as early as the 4th century of our era. The manuscripts of this language, written in the characters mentioned, afford therefore the most ancient and valuable data in investigating the history of Central Asia, nay, of the whole Turkish race. But these monuments are of great scarcity; he believes he has collected all that has been discovered of the Uigur language, though the Uigur had a literature and were very fond of books at a time when the western world was involved in ignorance and barbarism. The most valuable manuscript he obtained bears date 1069, and was written in Kashgar; it treats of ethics and political subjects, and forms a kind of manual of advice to kings how to govern with justice and success. It reveals the social condition of this people, and forms the basis of the later regulations by which all Turks are governed. —*Malcolm's Persia; Muller's Lectures; Ferrier's Journ.; Vambery, Bokhara.*

TURKANA amongst the Rajputs means tribute. It is derived from the word Turk, meaning Muhammadan, races who exacted tribute from the Rajputs.

TURKESTAN. The people of Central Asia who inhabit the countries which extend northwards to the Russian frontiers, westwards to the Caspian Sea, and southwards to Afghanistan, for the greater part are descendants of Turks, and it would be more correct to give to all these countries the general name of Turkestan, dividing it in the following manner:—

1st. Northern or Russian Turkestan, comprehending in it the three tracts of the Kirghiz nation, with Bokhara, Khokand, and part of Khiva.

2d. Southern Turkestan, inhabited by the Khivan, Turkoman, and Karakalpak, and including also Tashkend.

3d. Eastern Turkestan, comprising Little Bucharia, which is subject to China.

Turkestan races are the Uzbak, Karakalpak, Kara-Kirghiz, Kirghiz-Kazak, Turkoman, Tajak, Sart, Galcha, and Russians. The arable tracts, especially in Khiva, Bokhara, and Khokand (Fargana), from prehistoric times have been the joint home of races of Turki and Iranian blood.

Turkestan lowlands southwards are limited by the western continuation of the Hindu Kush as far as the Hari-Rud valley, and beyond that point by the Khorasan highlands as far as the Caspian.

Russian Turkestan is bordered on the west by the Caspian, the Aral river and mountains; on the east by the Pamir plateau, the Tian Shan and Altai ranges separating it from the Chinese empire; northwards by the low ridge crossing the Kirghiz steppes about the 51st parallel, and forming the water-parting between the Aralo-Caspian and Ob basins. For administrative purposes, part of Western Siberia, 40,000 square miles in extent, is attached to Russian Turkestan. Including this tract, Russian Turkestan has an extreme length from the Caspian to Lake Issukkul of 1400 miles west and east, with a breadth of nearly 1000 miles north and south, a total area of about 1,600,000 square miles, and a population of 6,500,000.

Western Turkestan is conspicuous for the high relief of the land. Nowhere on the surface of the globe are stronger contrasts to be seen than in the Aralo-Caspian depression and the Aralo-Caspian basin. In the latter region, the whole area of drainage consists of about even parts highlands and lowlands. While the lowlands fall in the Caspian as much as 85 feet below sea-level, the highlands in the culminating points of the Tian Shan and Great Pamir rise to 25,000 feet above it. The nucleus of the whole Central Asian highland system is formed by the Pamir, to which converge the Hindu Kush and Himalayas from the south-west and south-east, the Kouen Lun from the east, the Tian Shan from the north-east; whilst to the west the plateau itself merges in the snowy highlands and ice-fields about the sources of the Zar-afshan, between the Oxus and Jaxartes valleys. Between the eastern extension of the Tian Shan and the Balkash-kul stretches the broad Turkestan plain, bounded to the south-east by Kulja, the frontier province and long debateable land between the Russian and Chinese empires. By nature the richest land beyond the limits of China proper, this unhappy province bears witness, in its ruined cities and wasted plains, to the successive risings of Zungarians and Dunyans, the victims of which during more than a century are to be reckoned by millions.

Bokhara is an isolated kingdom in Turkestan of small extent, surrounded by a desert. It lies between lat. 36° and 45° N., and long. 61° and 67° E. It is an open champaign country of unequal fertility, and intersected by the Oxus on its southern border. Its rivers are the Amu or Oxus, the Syr or Jaxartes, the Kohik or Zar-afshan, and the rivers of Kurshi and Balkh. It is ruled over by an amir, now under Russia, whose sway is comprised between the parallels of latitude and the degrees of longitude above indicated. The Uzbak are undoubtedly the preponderating race in Bokhara, not so much from their number, as by the ties which bind them together. They are divided into stems and sections, like the Kirghiz, and have their elders or beys, who enjoy a certain consideration among them. The Uzbak branches, with some of their subdivisions, are enumerated in the work called Nassed Mameti Uzbakia.

The Russian acquisitions in Central Asia were directed to the Jaxartes in the first stage of their operations, and to the Oxus in the second. With the fall of Tashkend in 1865 the Russians completed the first part of their programme, and with the annexation of Khiva in 1873, the second. With the consummation of these conquests, and the subsequent absorption of Khokand, Western Turkestan was converted into a Russian province.

Eastern Turkestan, sometimes called Kashgaria, is a name for which there is no authority. European writers have called it Little Bokhara, a term quite unknown to the inhabitants or the neighbourhood. The Chinese call it the province of the Nan-loo, or province of the Southern Road, lying along the south of the Tian Shan range. The neighbouring Muhammadans call it Alti-shahr or Jeti-shahar, Turki-Persian words for the six cities and the seven cities, so designated according to the number of towns which it included at the time of speaking. It lies nearly due north of Kashmir. It is a gently undulating plain, about 250 miles across from N. to S. near its western extremity, where cultivation is the more abundant; open and gradually widening out to the east, where the great rainless desert of

Gobi extends, and from whence long arms of sand and shingle stretch back into the cultivated region up to the very walls of the cities and villages. Shut in on the S. by the mighty chain which forms the true backbone of Asia, various portions of which are known as the Kouen Lun, Kara-korum, Mustagh or Ice Mountain, Tagh-dung-bash or Head of the Mountains. On the west it has the extremely elevated plateau of Pamir, and on its north is the range known in Turki and Chinese as the Tengiri or Tian Shan range, both terms meaning heavenly, from the northern slopes of which the rivers of Siberia rise. The people, numbering about 1,500,000, are robust, industrious, frugal, of peaceful dispositions, and with strong desires to trade. The rainfall, even at the skirts of the hills, is limited to a few showers in the winter and spring, and the cultivation, which is limited to the artificial irrigation of the base of mountains and the banks of rivers, is carried on from the melting of the glaciers and the winter snows. The rivers ultimately unite in one, which disappears in a marsh far removed in the desert of Gobi. Wheat, barley, and Indian corn are produced; fruits are abundant, and of these the grapes are celebrated. Gold is found in the east of the Kouen Lun range. Jade, copper, lead, and sulphur are found in the Kara-korum and on the spurs of Pamir, and coal in the eastern parts of the Tian Shan mountains.

Eastern Turkestan was subject to China from the beginning of the Christian era to the time of Chengiz Khan; and after the middle of the 18th century, the Chinese regained possession of it. Eastern Turkestan is eminently Muhammadan, and its rulers had always been Muhammadan from the time of Taghalaq Timur, who was, we are told, the first Muhammadan sovereign of Kashgar of the lineage of Chengiz. Buddhism indeed was found still prevalent in the cities of Turfan and Kamil at the time of the embassy of Shah Rukh in 1419, and probably did not become extinct much before the end of the century. But, in the western states, Muhammadanism seems to have been universal from an earlier date, and maintained with fanatical zeal. Saintly teachers and workers of miracles, claiming descent from Mahomed, and known as Khwaja or Khojah, acquired great influence; and the sectaries attached to the chiefs of these divided the people into rival factions, whose mutual hostility eventually led to the subjugation of the whole country. For, late in the seventeenth century, Khojah Appak, the leader of one of those parties called the White Mountain (having been expelled from Kashgar by Ismail Khan, the chief of that state, who was a zealous supporter of the opposite party or Black Mountain), sought the aid of Galdan Khan, sovereign of the Eleuth or Kalmuk race of Dzungaria. Taking the occasion so afforded, that chief in 1678 invaded the states south of the Tian Shan, carried off the khan of Kashgar and his family, and established the Khojah of the White Mountain over the country, in authority subordinate to his own. Great discord for many years succeeded, sometimes one, sometimes another being uppermost, but some supremacy always continuing to be exercised by the khans of Dzungaria. In 1757, however, the latter country was conquered by the Chinese, who in the following year, making a tool of the White party, which was then in opposition, succeeded in bringing the states of Turkestan also under their rule.

Hoei Hoei.—The Chinese and the Manchu races call by the name of Hoei Hoei all the Muhammadan tribes who live under their dominion. This term, however, has ceased to designate a nation. As the Uigur Hoei Hoei, called simply Hoei Hoei under the Mongol dynasty of Yunan, were Muhammadans, this name is applied by the Chinese to all those of the same religion, in the same manner as the Russians are often called Greeks, because they are of the Greek Church. The inhabitants of the towns of Little Bokhara are in part descendants of the ancient Uigur Hoei Hoei, and consequently Turks, in part Sarti, or Bokharians, who are scattered as merchants all over Central Asia, and who are Persians. There are many of them at Pekin, Hang-chu-fu, Canton, and the other commercial cities of China. Their mother-tongue is Persian, but they also speak the oriental Turki, which is the general language of Turkestan, and the most diffused in Little Bokhara.

Language.—The Uigur writing character was the original source of those still used by the Mongol and Manchu, and was itself almost certainly derived from the old Syriac character through the Nestorians. The modern Tartar characters are written (and, it is presumed, read) in vertical lines from top to bottom of the page, the lines succeeding each other from left to right. What Uigur meant with Mongol authors is doubtful, but the people and language so called by the Western Asiatics were Turkish. Captain Valikhanoff speaks of the language now in use at Kashgar as being Uigur, but it is not clear whether he means that this term is known to the natives.

Towns.—The three principal towns in Turkestan are Elchi, in lat. 36° 50′ N., and long. 78° 20′ E., 5500 feet; Yarkand, in lat. 38° 10′ N., and long. 74° E., 4200 feet; Kashgar, in lat. 39° 15′ N., and long. 71° 50′ E., 3500 feet. Elchi is represented to have the coldest, and Kashgar the hottest, temperature of the three towns throughout the year. Snow falls at Kashgar, but never remains longer than a few hours; but it is seen lying in Yarkand for three or four days together.

The *people* of these regions are from two distinct sources, viz. the settled races; descendants of Semitic and Iranian conquerors from the south; and the races who have been occupying the country from prehistoric times. The last part of the inhabitants have been styled Turko-Tartars, and are in their habits the same as they were 2000 years ago. Vambery divides the Turks proper into Burut, black or pure Kirghiz; Kirghiz, properly Kazak; Karakalpak, Turkoman, and Uzbak.

The *Burut*, pure or black Kirghiz, dwell on the eastern boundary of Turkestan, viz. the valley of the Tian Shan chain of mountains, and they inhabit also several points on the shores of the Issik-kol, close upon the frontier chain of mountains. They have powerful, thick-set, strong-boned figures, but are remarkably agile, and have acquired much warlike renown. Their face is less flat than the Mongolian and Kalmuk, and less fleshy; their forehead somewhat higher, and their eyes are less almond-shaped than the Kalmuk; few of them have red or fair hair or a white complexion. The Burut are in contact with

Kalmuk and Mongolians, and in consequence their language has many Mongolian words, and now and then they profess themselves more or less Muhammadans, but Shamanism largely prevails. The Burut is the wildest and most savage and most superstitious of the Turk, but less malicious than the Kirghiz and Turkoman.

The *Turkoman* is the fourth gradation of the Mongolian Turkish race, and in many respects they resemble the Kazak and Karakalpak. The pure Turkoman type, as met with in the Tekke and Chadar tribe in the centre of the desert, is of middling stature, small oblong head, not high cheek-bones, somewhat snub noses; longish chins, feet turned in, with the bright, sparkling, fiery eyes of the desert races, but more particularly the Turkoman. The blonde colour is common,—indeed, the Kelt race amongst the Gorgen Yomut are generally half blonde. The Goklen and other tribes near Persia evidence an intermixture with the Iranian Persian. The Turkoman are slender and agile, and they are hardy and enduring under privations. They early separated themselves from other Turko-Tartarian nations, moving from Mangishlak in the east to the north-west, and thence to the south. In their present country, the Salor and Sarik are the oldest tribes; after them the Yomut, who at one time ranged from north to south along the shores of the Caspian. The Tekke were transferred by Timur to Akhal. The Ersari, at the close of the 18th century, moved from Mangishlak to the shores of the Oxus, and recently many of the Chadar moved to the other bank of the Oxus. The chief avocation has been pillage. The men wear long locks till the close of the first year of their marriage. The women are handsome, and perfect beauties are to be seen, not inferior to the Georgians in figure and regularity of features. The young girls of all nomade tribes are good riders, but Turkoman women excel all others. Turkoman women, amongst the nomades, wear heavy silver ornaments. They are the labourers of the community, are virtuous, devoted, and much respected. Uzbak women go unveiled.

The *Uzbak*, though settled in Central Asia for centuries past, still meditates on robbery and war, and if no foreign enemy be found, they attack each other in bloody internal strife. The Uzbak is honest, upright, has much Turkish open-heartedness; they are proud of their education, and represent all the best side of the national character of the Turks.

The nomade Uzbak and Turkoman of Central Asia were largely engaged in a slave trade, stealing the Persians and selling them in Bokhara. The Uzbaks of Khiva practised it when driven towards Persia by the Turkoman; and of the Turkoman, the Tekke tribe captured the people of Khorasan, Herat, and Seistan, and the Yomut tribe, those along the southern shores of the Caspian, but the Salor, Sarik, Kara Chadar, and Alieli captured Shiah Persians from the territory of the Persians.

In January 1884, the Tekke Turkoman of Merv at their own request became Russian subjects.

The name by which Vambery designates these peoples is Turko-Tartar, from amongst whom came the warrior peoples known in the west as the Hun, the Avar, the Uigur, the Kutrigur, and Khazar. And the manner of living, the customs, and physical conditions, as then described, of the Tartar tribes, whose arms reached from the Jaxartes to the heart of Rome and Gaul, have much resemblance to those of the present inhabitants of Turkestan; and the people of Central Asia, particularly the nomade tribes, are in their social habits the same as they were two thousand years ago. In the tent of many a nomade chief a similar life is observable as that described by Priscus as prevailing at the court of the king of the Huns. Attila, Chengiz Khan, and Timur, in historical character resemble each other; and Vambery is of opinion that energy and good fortune could now almost produce on the banks of the Oxus and Jaxartes one of those warriors whose soldiers, like an avalanche carrying everything before it, would increase to hundreds of thousands, and would appear as a new example of God's scourge, if the powerful barriers of western civilisation, which has great influence in the east, did not stop the way. This is a correct view.

The *Turk*, wherever met with, is ever heavy and lethargic in his mind and body, but in his resolves firm and stedfast, not from principle, but from apathy and aversion to change; and it is from these characteristics that his appearance is earnest and solemn, a profound seriousness, a marble cold expression of countenance, with a great inclination to pomp and magnificence. An Uzbak or Turkoman has a proud bearing, as if possessed with a self-consciousness of greatness and power.

The Osmanli Turk's love of independence is boundless. He considers himself born to rule, that hunting and war alone are worthy of him, and husbandry is considered ignominious. In Central Asia, agriculture is exclusively in the hands of the Persian slaves,—commerce and business with the Tajak, Hindu, and Jew. The Turk is intellectually the inferior of the Iranian and Semitic nations. This defect is noticed by other nations, who apply to them the terms Turkluk (Turkdom), Kabalik (coarseness), Yugunluk (thickness), and Sadeluk (simpleness); and with these qualities, as the Osmanli is easily taken in by the Armenian, Greek, and Arab, the Turk is as easily so by the Tajak and Hindu. In transactions the Turks are regarded as possessing more honesty, frankness, and confidence, plainness, simplicity, and uprightness. Compared with the Persians, the Turk is a faithful servant, attached soldier, and upright man. They are more brave, persevering, and love more to rule than any other Asiatic people. They are unpolished, wild, and uncultivated, but seldom cruel out of malice. They crave riches, but only to expend them. They exact much labour from their subordinates, but protect and deal liberally with them. The Turk is innately a nomade, and, like other nomades, is distinguished for hospitality.

In Balkh and near Andkhui the harvest is at the beginning of June; in the oasis countries, in July; in Kungrat and in the north of Khokand, not till the beginning of August. Of the rivers, the Oxus is the most important, and the Zar-afshan, Shahar Sabz, and Jaxartes follow.—*Vambery's Sketches of Central Asia*, p. 283; *Russians in Cent. Asia; Yule, Cathay; Timkowski's Journey to Pekin.*

TURKEY, an empire in the east of Europe, south-west of Asia, and north of Africa, ruled by a race of Othmanli Turk, descended from Othman or Usman, who founded the empire in A.D. 1299. A pastoral band of 400 Turkish families was journeying westward from the upper streams of

the river Euphrates. Their armed force consisted of 444 horsemen, and their leader's name was Ertoghrul, which means 'the Right-Hearted Man.' As they travelled through Asia Minor, they came in sight of a field of battle, on which two armies of unequal numbers were striving for the mastery. Without knowing who the combatants were, the Right-Hearted Man took instantly the chivalrous resolution to aid the weaker party, and, charging desperately and victoriously with his warriors upon the larger host, he decided the fortune of the day. Such, according to the oriental historian Neschri, is the first recorded exploit of that branch of the Turkish race, which from Ertoghrul's son, Othman, Osman, or Usman, has been called the nation of the Ottoman Turks and the Osmanli. And in this their earliest feat of arms, which led to the foundation of their empire, we may trace the same spirit of haughty generosity that has been their characteristic down to our own times. The little band of Ertoghrul was a fragment of a tribe of Oghuz Turk, which, under Ertoghrul's father, Sulaiman Shah, had left their settlements in Khorasan, and sojourned for a time in Armenia. After a few years, they left this country also, and were following the course of the Euphrates towards Syria, when their leader was accidentally drowned in that river. The greater part of the tribe then dispersed; but a little remnant of it followed two of Sulaiman's sons, Ertoghrul and Dundar, who determined to seek a dwelling-place in Asia Minor, under the Seljuk Turk, Ala-ud-Din, the sultan of Iconium. The adversaries from whose superior force they delivered him were a host of Mongols, the deadliest enemies of the Turk race. Ala-ud-Din, in gratitude for this eminent service, bestowed on Ertoghrul a principality in Asia Minor, near the frontiers of the Bithynian province of the Byzantine emperors. The rich plains of Saguta along the left bank of the river Sakaria, and the higher district on the slopes of the Ermeni mountains, became now the pasture-grounds of the father of Othman. The town of Saguta or Saegut was his also. Here he and the shepherd-warriors who had marched with him from Khorasan and through Armenia, dwelt as denizens of the land. Ertoghrul's force of fighting men was largely recruited by the best and bravest of the old inhabitants, who became his subjects; and, still more advantageously, by numerous volunteers of kindred origin to his own. The Turk race had been extensively spread through Lower Asia long before the time of Ertoghrul. Quitting their primitive abodes on the upper steppes of the Asiatic continent, tribe after tribe of that martial family of nations had poured down upon the rich lands and tempting wealth of the southern and western regions, when the power of the early khalifs had decayed like that of the Greek emperors. One branch of the Turks, called the Seljukian, from their traditionary patriarch Seljuk Khan, had acquired and consolidated a mighty empire more than two centuries before the name of the Othmans was heard. The Seljuk Turks were once masters of nearly all Asia Minor, of Syria, of Mesopotamia, Armenia, part of Persia, the Western Turkestan; and their great sultans, Toghrul Beg, Alp Arselan, and Malik Shah, are among the most renowned conquerors that stand forth in oriental and in Byzantine history. But by the middle of the thirteenth century of the Christian era, when Ertoghrul appeared on the battlefield in Asia Minor, the great fabric of Seljukian dominion had been broken up by the assault of the conquering Mongols, aided by internal corruption.

Population.—Ravenstein and Behm and Wagner are the authorities chiefly relied on in enumerating the population of Turkey. Their calculations and the annual Sal-namahs, with information from the British consuls, would show 25,994,000 inhabitants in the empire. The Turkish Ministry of Finance issued in 1867 a statistical notice, in which the population of Turkey is placed at 18,500,000 for Europe; 16,500,000 for Asia, with Cyprus; and 5,000,000 for Africa; making a total of 40,000,000 for the empire. But Messrs. Ubicini and Courteille put the total population of the empire, exclusive of the tributary States, at 28,500,000. These are mere estimates. The empire of Turkey may contain about 11,500,000 of the conquering race, the remaining number being an agglomeration of races of different origin, language, and religion, some 6,000,000 of them being Muhammadans. In European Turkey, however, there are only about 2,000,000 of Osmanli, sparsely settled; whereas in Asia, and chiefly in Asia Minor, there is a compact mass of 9,000,000 to 10,000,000. To the same group belong some 300,000 Turkomans in Asia and some 200,000 Tartars in Europe from the Crimea. The Greeks do not seem to number more than 1,000,000 in Asia and 1,000,000 in Europe, chiefly along the coasts and in the islands. In European Turkey there are about 500,000 of Armenians, chiefly in Constantinople and a few large towns, whereas in Asiatic Turkey there are 2,000,000. To the same ethnographic group belong 1,000,000 of Ottoman Kurds in Asia, who are Muhammadan, but often hostile to the Osmanli. Lastly, there are in European Turkey about 200,000 Muhammadan gypsies and more than 100,000 Jews of Spanish descent, and in Asiatic Turkey about 1,500,000 of Arabs and others of the Semitic group.

TURKHANI or Turkolani, a tribe that came to Sind and were in power from A.H. 962 to A.H. 1021. On the death without issue of Mirza Shah Husain Arghun, who ruled over Sind, that province was divided by two chiefs,—Sultan Muhammad Bukri took Sehwan and all to the north, and Mirza Esa the remainder. Mirza Esa, the father of Mirza Baki Turkhan, was the first of the Turkhan who governed Lower Sind. He died A.H. 980, A.D. 1572. The tomb of Mirza Baki Turkhan is on the Muklee range of hills near Tatta. Mirza Baki assumed the government of Lower Sind on the demise of his father Mirza Esa. He died A.H. 993, A.D. 1585. The tomb of Mirza Jani Beg Turkhan was also built on the Muklee range, about A.H. 1009, A.D. 1680. He was son of Payand Beg Turkhan, and was the last Turkhan who governed Lower Sind, of which Tatta was the capital. He had succeeded to the government on the demise of his grandfather Mirza Baki Turkhan in A.H. 993, A.D. 1585, his father being insane. He ruled for seven years, till Abdul Rahim Khan, a general of Akbar, conquered Sind. Mirza Jani Beg visited Dehli, and was graciously received and the country was restored to him, but he was not allowed to return to Tatta. The government was carried on by his agents until his death, which took place in 1008 Hijira, A.D. 1599,

when his son Ghazi Beg was called to Dehli. Ghazi Beg remained there some years, after which he was appointed Governor of Kandahar, over which province he ruled until his death, which took place in 1020 Hijira, A.D. 1611. Both he and his father were, after death, carried to Sind, and buried in one tomb. The Turkolani tribe now inhabiting the valley of Bajawar (written Bajour) number about 10,000 or 12,000 families, and the other inhabitants of Bajawar are about 30,000. They are next to the Yusufzai, whom they resemble in food, lodging, and habit of life. They are brave, industrious, cheerful, and fond of amusement. They often meet to converse, sing, play on the guitar, and they have some of the active games of Khorasan.—*Lt.-Col. MacGregor*, iii. p. 220.

TURKISH ARABIA, a province of Turkey, has an area approximately of 140,000 square miles. Its population comprises Arabs, Kurds, Jews, and Christians. Baghdad, its capital, is situate on both banks of the Tigris, and is the headquarters of the Wali in charge of the administration, assisted by a Muâwin, with a general officer, who is in direct communication with the War Minister at Constantinople. Two of the three districts into which Kurdistan is usually divided, fall more or less within the limits of Turkish Arabia. These two districts are Central Kurdistan and South-Eastern Kurdistan. The former extends north and south along the Turco-Persian borders from Lake Van to Sulimania; the latter comprises the Turkish districts of Sulimania and Sharizor, the Persian provinces of Ardelan or Sehna and Kermanshah, and a strip of country, including the plain of Zohab, from Kermanshah to the extremity of the Luristan Hills. The Turkish Kurds in the districts of Van, Mosul, and Sulimania may number 700,000 souls. They are of the Sunni sect of Muhammadans, and devoted followers of Abd-ul-Kadir Ghilani, the founder of the Kadria section of darvesh, whose tomb is at Baghdad.

The country lying between the towns Kut-el-Amara and Amara, and inland as far as the Persian frontier, belongs to the Beni Laam, a powerful Arab tribe, and they and their neighbours, the Feili Kurds, are Shiah Muhammadans. Amara town is the S.E. limit of the Beni Laam territory, and is just above the marshes of the Tigris where the river Hud flows out of the Tigris. The Tigris and Euphrates unite at Kurna to form the Shat-ul-Arab stream. The Turks claim the right bank of its whole course, but the left bank, from a point a few miles above Muhamera and thence to the sea, is occupied by the Kaab Arabs, who are in subordination to Persia.

Mesopotamia, or the doab between the right bank of the Tigris and the left bank of the Euphrates, is known to the Arabs as Jazirah, meaning island. Its inhabitants are Arabs. Those at its upper part are the Shammar Jarba tribe, who migrated from Nejd about the middle of the 18th century. They are of the Sunni sect, and are still nomade Bedouins, wandering over the whole of Northern Mesopotamia. In the summer their chief pasturage ground is at Shergot, on the Upper Tigris, a short distance below Mosul, and in the winter they approach Baghdad to buy supplies. They are at feud with the neighbouring tribes, the Anezeh, the Dilem, and the Montefik, the last a small population of many Fellah tribes.

In the lower part of Mesopotamia, the people are of the Shiah sect, especially in the neighbourhood of the holy cities Kazmain, Karbila, and Najaf.

British relations with Turkish Arabia date from the formation of the East India Company, a factory having been formed in Basra under the supervision of the Company's agent at Gambrun or Bandar Abbas in the Persian Gulf. Until A.D. 1833 the resident officers' duties were partly commercial and in part political, but since then wholly of the latter character, under the Political Agent at Baghdad.

The Tigris is navigable at all seasons of the year from Mosul, and in the spring floods from Diarbekir. The Euphrates is navigable from Balis to Kurna, where the two rivers join. From Kurna to the sea there is water for vessels of very considerable draught.—*Tr. Chichely Plowden.*

TURKOMAN inhabit the desert country comprised by a line drawn through Astrabad, Herat, and Balkh on the south, the course of the Oxus from Balkh to the Aral on the east, the Caspian on the west, and the elevated plateau called the Ust Urt lying between the seas of the Caspian and the Aral on the north. They must not be confounded with the Kirghiz or Kazak. They have never been under one head, but have tribes (khalk), branches (taifé), and tiré or clans. Some of them are nomades, and others are settled on the river valleys. Their tribes or khalk and their estimated numbers are as under:—

1. Chandor or Chooder, between the Caspian and Aral, 12,000 to 20,000 tents. They have seven taifé.

2. Erzari or Orzari, on the left bank of the Oxus, 50,000 to 100,000 tents.

3. Alich or Andkhui, near Andkhui, 100 tents.

4. Kara, a savage, predatory tribe, between Andkhui and Merv, 1000 tents.

5. Salor, a brave, ancient tribe, about the Murghab and Merv, 6000 tents.

6. Sarik, about Panjdeh, on the banks of the Murghab, 9000 or 10,000 tents.

7. Tekke, the most warlike and powerful of all the tribes. They range from N. of the Goklens up to Khiva, and beyond Merv Shah are found on the bank of the Oxus. Their two encampments are the Akhal Tekke to the E. of the Tajend swamp, and Merv Tekke at Merv. They have little of arable land, and lived by robbery and enslaving Persians. Their tents number 40,000 (Abbott) to 60,000 (Vambery), Marvin 50,000. Merv is the central position of this tribe, and in January 1884, at their own request, Russia annexed Merv.

8. Goklen, a pastoral and agricultural tribe of 8000 or 10,000 tents in the valley of the Gorghen, for 90 miles, till they meet the Kurds. They are mostly subject to Persia. They are at inveterate feud with the Tekke to the N. They have ten clans.

9. Yomut are in two branches, the Gorghen Yomut on the Gorghen river under Persia, and the Yomut of Khiva in the desert on the left bank of the Oxus. They enslave Persians. They number 40,000 to 50,000 tents.

Population.—According to Major Abbott, the total tents of Turkoman are 91,700; according to Professor Vambery, 196,000, or respectively 458,500 and 982,500 souls. The Turkoman have no shadow of government; each is lord of his own

tent, but they show a little respect to old age and to valour, and highly prize purity of Tartar descent in the Eeg or free-born. Were the tribes to combine, Persia would be at their mercy. Their average height is 5 feet 7 inches; features irregular, beardless, eyes small and round, with a bold, penetrating glance, and a proud military bearing. They are honest amongst themselves, though predatory to strangers, and they are hospitable. The men attend only to their horses, listen to story-tellers. Their arms are a curved sabre and long spear, with gun or pistol, and the Tekke have cannons. The women are often good-looking, and are chaste. They marry early, occasionally before puberty, and have the show of attacking the bride's camp, to seize her, also the Kokburi (green wolf), where the bride, in bridal costume, rides off with the carcase of a lamb or goat. They are Sunni Muhammadans, but uneducated and barbarous. The modern travellers who have given accounts of the Turkomans are General Petroosevitch, Major Butler, Colonel MacGregor, Major Burnaby.

TURKOMAN HORSES are a modification of the Arab breed. Timur introduced new blood by dispersing amongst the tribes 4200 mares, which he had selected in Arabia from the very best breeds. Afterwards, Nadir Shah renewed this cross with 600 mares from Nejd, which he confided exclusively to the Tekke tribe, and the horses of this tribe are now held in the highest estimation in all Turkomania, especially those from the district of Akhal. The next in reputation after the Tekke horses are those of Merv Shah Jahan, the horses of Yomut and the Goklen, and the race of the Murghab, of the Hazara, the Uzbak of Maimana, Shibbarghan. The race dates back originally, like the British thoroughbred, to the Arab, but it is now distinct; and, besides being much larger, they far excel the Arabs both in speed and endurance. In appearance they more nearly resemble the English thoroughbred or race-horse than any other type, and average about the same height, perhaps, if any thing, standing a little higher. Action is usually spoilt by the custom of tying the hind and fore leg of the colt on each side together, in order to make them 'tripple,' or walk 'disconnected' at the fast easy pace in which a Turkoman delights. It is at this pace, about five miles an hour, that they do their long, slow journeys, while the quick raids are made at a slow gallop. The steppes of Turkomania are very favourable to the development of the equine race, the pasturage and artificial grasses grow in dry soils, having no other nourishment than the winter snows. Green food is produced on these steppes only in the spring; at that season the Turkoman refrain from making any expeditions, and this state of abnegation continues to the end of July. During this period they have time to gather in their crops, and their animals rest the limbs which have so well done their duty the previous season. From the month of August up to the winter they are kept on dry food; this consists of seven pounds of barley per diem, mixed with dry chopped straw, luserne, sainfoin, or clover-hay, unless a chapaoul is coming off, in which case the horse is put upon half forage. They are most carefully clothed, but stand in the open air. They have thick felt coverings made, both as hoods and rugs, completely enveloping the whole body. The thick, heavy hoods wear away the mane, and prevent its free growth, and then the Turkoman trims or hogs it. A high-class Turkoman is nearly always followed by a yaboo, or pony, carrying his heavy clothings. Every horse is carefully tested, and his quality is exactly known by the tribe; and a horse of extreme merit is most closely guarded, and never sold except for a very large sum. They are raced over long distances, extending to as much as 40 and 50 miles; but they also have shorter races of 5 or 6 miles to test speed. The horses are sedulously prepared before being thus tried. Good, hardy, useful animals, averaging about 15.2 in height, can be purchased for from £15 to £20, whereas a very high-class horse will sometimes fetch between £400 and £500, or even more. The Turkoman is quite as gentle as the Arab, and generally more quiet and sedate in his ways and habits, whilst equally courageous. That they would prove as fast as the best English race-horses for very short distances, it is difficult to believe, for they have not been bred wholly for speed; but there is no reason to doubt that they would hold their own in very long races. Their stamina and general powers of endurance are certainly far in excess of those of the British thoroughbred horse.

TURMERIC, Curcuma.

Zur-sud, Tumr, .	ARAB.	Kunhet, . . .	MALAY.
Hurridra, . . .	BENG.	Mangella-cua, .	MALEAL.
Than-u-wen, . .	BURM.	Zard-chobeh, . .	PERS.
Arsina, ...	CAN.	Karkum, . . .	,,
Keang-whang, .	CHIN.	Cypira herba Indica,	PLIN.
Kupeiros Indicos,	GR.	Peeta, Haridra,	SANSK.
Hallad, Haldi, .	HIND.	Haradul, . . .	SINGH.
Daru-hallad (inferior),	,,	Haran-haha, . .	,,
Turtumaglio, . .	IT.	Munjal, . . .	TAM.
Kunir, Kunit, .	MALAY.	Pampi, Passapu,	TEL.

Turmeric derives its name from 'terra merita.' Turmeric is the ground tubers of Curcuma longa, C. rotunda, C. angustifolia, C. viridifolia, and C. zedoaria. It is extensively grown throughout the East Indies, China, and the Archipelago, for home consumption and for export. The bulbs are small, and furnished with numerous long palmate tubers, internally of a deep-orange colour. There are two descriptions of tubers, the one round, the other long, but both are yielded by the same plant. The odour is aromatic, somewhat analogous to ginger, but peculiar; the taste is aromatic. When chewed, it tinges the saliva yellow. Its powder is orange-yellow. Turmeric is used in dyeing a yellow colour, which is not, however, very permanent, and it is also largely used as a condiment in curries. In 1882–83, 63,570 cwt. were exported from India, value Rs. 3,72,077. The trade has rapidly decreased. Amba haldi is the term applied to the dyer's turmeric. Turmeric is grown like ginger from cuttings, or sets, which are little pieces of the fresh root cut up and planted. In India, amongst Muhammadans and Hindus, after betrothment and before marriage, the body is anointed with turmeric. Amongst Hindus, when they for the first time wear a new cloth or dress, they stain its four corners with turmeric, to ward off the evil eye and guard against malignant spirits. Turmeric is always emblematic of good tidings; for a soldier to smear his clothes with turmeric, denotes that he devotes his life as a sacrifice.—*Mason; Birdwood; M. E. Jur. Rep.; Poole; Simmonds; Powell.*

TURNER, Lieut. SAMUEL, went as ambassador to Tibet. Full particulars of this journey were published in 1783 in London, with an accurate map of the route. Captain Turner's route was from Rungpur in Bengal, to Tassisudon in Bhutan, and thence by the Chumulari pass across the Himalaya to Teshu Lumbu. He wrote, Embassy to the Court of the Teshu Lama in Tibet, containing a Narrative of a Journey through Bhutan and part of Tibet, 1800. He also wrote on the Yak of Tartary in Asiatic Researches. He was deputed by Warren Hastings, in 1783, on a second mission to Tibet, but was prevented reaching Lhassa by the state of the government.

TURNIP, Brassica rapa, requires a free light soil. Turnips are cultivated in all parts of the Dekhan, at the commencement of the rains and the cold weather. They continue until the latter end of February, and go to seed easily. Among the varieties produced by long cultivation are the common turnip, the Swedish turnip, and another which is largely cultivated for the oil contained in its seeds, which under the name of colza oil is used for lamps.—*Riddell; Jaffrey.*

TURNOULI or Tarnawali. The village of Tarnawal is in the Mangal subdivision, Mansera division, of the Hazara district. It has a population of about 1498 souls, viz. 78 Jadun, 164 Syud, 248 Awan, and 1008 others. The Turnouli chiefly belong to Hazara, but they hold lands on both sides the Indus. They leagued with the Jadun tribe of the Mahaban, and with the Chagarzai, Hasanzai, and other northern Pathan tribes; they proved most formidable opponents to the Sikhs.

TURNOUR, GEORGE, son of the Honourable George Turnour, the first Earl of Winterton, was born in Ceylon in 1799, educated in England, and entered the Ceylon Civil Service in 1818. He wrote on the Buddhist History of Ceylon, and Indian Chronology, in vols. v. and vi. of Bengal As. Soc.; a series of essays on the Pali Buddhistical Annals. But his great work was his translation of the Mahawanso. He died at Naples, 10th April 1843.

TURNSOL, the Abd-us-Shams of the Arabs, also called by them Dawwar-us-Shams. The Ansariah tribe regard it as the emblem of the deity, the slave or servant of the sun, who is called Ilah-ul-Alihah, the God of gods.—*Catafago.*

TURPENTINE.

Ratenuj-rumi, Butum, Ar.	Kota, ... Nepal.
Kelon-ka-tel, . . Hind.	Zungbari, . . . Pers.

Turpentine is obtained in the north of Europe, in America, and in the Himalayas, from species of Larix, Abies, and Pinus, fir, pine, and larch trees, as also in Canada from trees of the genus Pistacea. Abies excelsa, the Norway spruce fir, yields the Burgundy pitch of commerce; Canada balsam is from the Abies balsamea; Venice turpentine is obtained from Larix Europæa; common turpentine is obtained from Pinus sylvestris, P. palustris, P. tœda, and other species of pine and fir, as also from the Pistacea terebinthus. Pinus morinda of the Himalayas yields spontaneously a very fine resin. Cedrus deodara is an elegant and lofty tree, hardy as the larch, and yielding valuable timber. Its turpentine has been long employed in medicine by the Hindus, and was known even to Avicenna. It is the Kelon-ka-tel, and is in great repute in the N.W. of India, from its stimulant properties and power of healing deep-seated ulcers, as in elephants and camels. Old and concrete American turpentine is often sold as frankincense.

Turpentine Oil.

Eau de raze, . . . Fr.	Acqua di rasa, . . It.
Huile de terebenthine, ,,	Aguarras, ... Sp.
Turpentinol, . . . Ger.	

The produce from the crude article is about from 14 to 16 per cent. Sweet oil of turpentine appears to be carefully rectified oil. The common oil contains some resin, which colours it. Camphene is rectified oil of turpentine. Turpentine is extensively employed, as the solvent of the other resinous bodies, in the formation of varnishes. The rectified oil has been much used as a solvent of caoutchouc. That distilled from the turpentine of the common long-leaved fir of the Himalayas, is of very superior quality.—*Royle, Productive Resources of India.*

TURPINIA NEPALENSIS. *Wall.*

Neela of Neilgherries.	Alla-kirilla, . . Singh.
Kon koombala, . Singh.	

A good-sized tree, common on the mountains of Ceylon, also all over Darjeeling, and in Hong-Kong; it is occasionally found in very low elevations not much above sea-level; it is particularly common about Ootacamund at 7000 feet; it is called neela.—*Beddome, Fl. Sylv.*

TURQUOISE. Eng., Fr.

Turkiss, ... Ger.	Turchina, ... It.
Firozah, ... Hind.	Turquesa, ... Sp.

This precious stone is found at Khojend, in Mawar-ul-nahr or Transoxiana, at Shebavek, in hills near Shiraz, in the Tibet hills, in Kirman, and in a mountain of Azerbijan, where the mine was discovered about fifty years before Ahmad bin Abd-ul-Aziz composed his Treatise on Jewels. He describes the mine about 30 miles from Nishapur as most celebrated from early ages for that particular kind of turquoise entitled Abu Ishaki, which, says he, averts evil from those who wear it, conciliates the favour of princes, augments wealth, preserves the sight, ensures victory over an adversary, and banishes all unpleasant dreams. The ancient sages, when first they beheld a new moon, immediately after fixed their eyes, says he, on the Firozah. The turquoise, from whatever source, is apt to change colour if brought in contact with acids, musk, camphor, or other scents, and possibly from the state of the weather. Small clear Persian stones found at Nishapur in Khorasan, sell at 6d. to 20s. each, whilst a fine ring stone will realize from £10 to £40; a perfect stone of the size of a shilling and of good depth has been sold for £400. It varies from white to fine azure blue, but it is only the fine blue stones that are of any value. From the Persian name Firozah is the colour called Firozah rang, turquoise blue. The best are from Nishapur, and are described by Ferrier as classed into eight kinds,—fatahi, azhani, sulimani, zanwi, asmani, abd-ul-hamidi, Indalisi, kanjinya. Turquoise of Badakhshan is of a blue colour, but is inferior to that of Nishapur. Turquoise is rather a favourite stone with the Muhammadans of India. Near Khojend is a turquoise mine, but the stones found there are of a greenish hue, and far less esteemed than those of Nishapur. There is another of insignificant note somewhere in Kirman. It is a hydrated phosphate of aluminum.—*Fraser's Khor-*

asan, p. 105; *Mrs. Harvey, Tartary, etc.*, i. p. 355; *General Ferrier; Ouseley's Travels*, i. p. 211; *Emmanuel; Tavernier; Markham's Embassy*, 108.

TURTLES are of two kinds,—of the family Trionycidæ or fresh-water turtles, and of the Chelonidæ or marine turtles, viz.:—

Fresh-water Turtles, Trionycidæ.

Emyda granosa, *Gunth.*, India.
E. Ceylonensis, *Gunth.*, Ceylon.
E. vitrata, *Peters*, Goa.
Trionyx Sinensis, *Wiegm.*, China, Chusan, Formosa.
T. Gangeticus, Nepal, Ganges, Penang.
T. Javanicus, *Schw.*, India, Java.
T. ornatus, *Gray*, Siam, Cambogia, Borneo.
T. Guntheri, *Gray*, India.
Chitra Indica, Nepal, Malay, and Eastern Archipelagos.

Marine Turtles, Chelonidæ.

Caouana olivacea, *Gray*, Indian seas.
C. caretta, Cape seas.
Chelonia virgata, *Gray*, Indian coasts.
Caretta squamata, *Gunth.*, Archipelago, Maldives, Ceylon.
Dermatochelys coriacea, *Gray*, all seas.

Marine turtles form an important article of food, and their scales are the tortoise-shell of commerce. Four different kinds are distinguished at Cape York and the Prince of Wales Islands. Three species of these can be identified as the green, the hawk's-bill, Caretta squamata, and the loggerhead, Caouana olivacea; and the fourth, a small one, which is said to be caught by a live sucking fish (Echeneis remora) being secured by a line passed round the tail, and thrown into the water in certain places known to be suitable for the purpose. The fish while swimming about makes fast by its sucker to any turtle of this small kind which it may chance to encounter, and both are hauled in together.

The green turtle is of so much consequence to the natives of the Archipelago, that they have distinguished it by a special name taken from the animal itself (Sulangi, from Sular). The season of the year when it is most plentiful at Cape York usually extends from about the middle of October until the end of November, but the limits are not constant. During the season they are to be seen floating about on the surface of the water, often in pairs, male and female together. A few are caught at night on the sandy beaches, but the greater number are captured in the water. The canoes engaged in turtling, besides going about in the day, are often sent out on calm moonlight nights. When a turtle is perceived, it is approached from behind as noiselessly as possible; when within reach, a man in the bow carrying the end of a small rope jumps out, and, getting upon the animal's back, with a hand on each shoulder, generally contrives to turn it and secure it with the rope before it has got far. This operation requires considerable strength and courage, in addition to the remarkable dexterity in diving and swimming possessed by all the blacks of the north-east coast of Australia and Torres Strait. There are some favourite look-out stations for turtle, where the tide runs strongly off a high rocky point. At many such places, distinguished by large cairns of stones, bones of turtles, dugongs, etc., watch is kept during the season, and when a turtle is perceived drifting past with the tide, the canoe is manned and sent in chase. At the islands of Talen-Talen many thousands could be easily procured. The Malays watch during the night, to ascertain where the turtle deposits her eggs, for as soon as she has finished her task, she covers them with her flippers with sand, and immediately retires into the sea. A piece of wood is then put up as a mark for the nest, which is rifled as occasion requires. It is said as a curious fact, that the male turtle never lands. On the south-western coast of Ceylon, at certain seasons, the flesh of turtle is avoided as poisonous. At Pantura, to the south of Colombo, twenty-eight persons who had partaken of turtle, in October 1840, were immediately seized with sickness. The hawk's-bill turtle, which supplies the best tortoise-shell, was at former times taken in great numbers in the vicinity of Hambangtotte during the season, when they came to deposit their eggs. This gave rise to the trade in tortoise-shell at Point de Galle, where it is still manufactured into articles of ornament by the Muhammadans, but the shell they employ is now almost entirely imported from the Maldives. If taken from the animal after death and decomposing, the colour of the shell becomes clouded and milky, and hence the cruel expedient is resorted to of seizing the turtles as they repair to the shore to deposit their eggs, and suspending them over fires till heat makes the plates on the dorsal shields to start from the bone of the carapace, after which the creature is permitted to escape to the water. At the period of breeding, the identical tortoise is believed to return again and again to the same spot, notwithstanding that at each visit she may have to undergo a repetition of this torture. In the year 1826 a hawk's-bill turtle was taken near Hambangtotte, in Ceylon, which bore a ring attached to one of its fins that had been placed there by a Dutch officer thirty years before, with a view to establish the fact of these recurring visits to the same beach. The finest tortoise-shell is exported from Celebes to China. The natives kill the turtle by blows on the head, and immerse the shell in boiling water to detach the plates. Dry heat is only resorted to by the unskilful, who frequently destroy the tortoise-shell in the operation. Mention is made of a carapace about seven feet in length.

The midas turtle is said to lay from ten to twelve dozen of eggs, and Dermatochelys coriacea from eighteen to twenty dozen at once; but many of the marine turtles lay from one hundred to two hundred and fifty. The eggs are generally hatched by the sun in three weeks. On escaping from the eggs, the young are of a white colour, and in size a little larger than a rupee, but few survive the attacks of sea-birds, herons, and storks in their way to the ocean, and the sharks and shark-toothed fishes when there.

The flesh of the hawk's-bill turtle is not held in esteem, but the plates of its shell being thicker, stronger, and cleaner than those of any other species, it is of great importance as an article of trade. When heated in boiling water, it softens, and by pressure can be made to assume any form, or two pieces can be made to adhere. In this state, gold, silver, and other metals are made to adhere to tortoise-shell.

The loggerhead turtle, Caouana caretta, is common in the Mediterranean and the Atlantic Oceans, less so in the Indo-Pacific. Of no commercial value, as its flesh is not esteemed, and its tortoise-shell of inferior quality. — *Jour. Ind. Arch.; Tennent's Ceylon; Gunther's Reptiles;*

Macgillivray's Voyage; Marryat's Ind. Arch.; Mr. J. Rohde, MSS.; Darwin, p. 547.

TURTUR, a genus of birds, the turtle doves, of the sub-family Turturinæ, and order Gemitores. Their generic name in the Urdu is Fakhta. The Indian species are—

T. rupicolus, *Pallas*, of N. and N.E. Asia, Himalayas.
T. meena, *Sykes*, all British India.
T. Cambayensis, *Gm.*, all British India.
T. Suratensis, *Gm.*, all British India.
T. risoria, *Linn.*, common ring dove, Africa, Malay Peninsula, Java, and Archipelago.
T. humilis, *Temm.*, British India, Archipelago.
T. bitorquatus, *Tem.*, of Java, Timor.
T. brevicaudatus, *Blyth.*
T. macrodactylus, *Strick.*
T. Dussumieri, *Tem.*, Archipelago.
T. ugrinus.
T. auritus.
T. orientalis.
T. Chinensis.
T. vivaceus.

TURTURATI, female, Chatway (Chatua), male hawks, natives of Sind, with black eyes; they are let loose after the season. See Hawking.

TURTURI. HIND. A musical instrument, a trumpet.

TURUSHKA, a name of the Scythi who, under Kanishka, invaded India. A Hindu name for the Muhammadans of India, Tartary, and Kábul.

TURVASA, son of Yayati by Devayani. He refused to bear the curse of premature senility passed upon his father, and so his father cursed him.—*Dowson.*

TURWEEAH, the eighth day of the Muhammadan month Zeehuj is so called.

TUS or Tuz. HIND. A bark upon which, in addition to leather, the ancient Persians wrote, and seems also to have been anciently used in Northern India. In Hiwen Thsang's time, the early Buddhist scriptures of Kasyapa's council were written on the leaves of the tala palm. In the 11th century, according to Alburini, paper was used. In the south of India the leaves of the palmyra are still (1884) used, but in the provinces of Central and Northern India they had long used the inner bark of a tree called tuz, and it was the bark of a tree of the kind called bhoj, a species of Morus or Betwa, with which they covered their vessels, supposed to be bark of the Betula bhojputra.

TUS, an ancient city of Khorasan, two marches N.E. from Nishapur, and a little to the north of the modern town of Meshed. It consisted of two towns, Tabaran and Nukan, and was once a place of considerable importance, but it was devastated by the Uzbaks in 996 A.H. (1588 A.D.), and its place has been taken by Meshed.

TUS or Tush. HIND. Wool, shawl-wool. The first quality of shawl-wool is called shah-tus or ash-tus. Tus khud rang or grey tus is the second quality of shawl-wool, its name meaning wool of natural colour. Raw pashm of the Tibetan goat, used in the manufacture of Kashmir shawls of the kind called tusha, is produced in Tibet.

Tusi is a fine cloth of Kashmir, used as a lining for shawls, also for stockings and gloves. It is woven from the soft under-fleece, called Asali Tus, of the Capra sibirica or Himalayan ibex, which are shot and snared in winter in Chini, near the Sutlej valley, and in the Balti valley and Ladakh. No wool is so rich, so soft, and so full.

TUSKI, a lake in Ladakh, about two miles long and half a mile in breadth; its waters are highly impregnated with soda. No fish are obtained in the lake, nor in the fresh-water streams which run into it. A mountain barometer makes the lake 15,000 feet above the sea-level. It is frequented by herds of mahoor or wild sheep, and several herds of kiang.—*Adams.*

TUSSAH, a silk cloth, prepared from the silk of a wild worm, and woven, in some districts in Bengal, into cloth of a fine description, much used for ladies' and children's dresses, and in most parts of India for native use, being worn by Hindus for certain ceremonies and while bathing. It is an article of export. In the Dekhan, the tussah worm-breeders are a class quite distinct from the weavers, and are either Telingas of low caste or Gonds; the former reside principally at Chilpore, Madapore, and Chinnore. At Madapore, which may be regarded as the centre and headquarters of the tussah breeders, there are at least seventy families. The tussah breeder never thinks of keeping up the breed of the insect throughout the year. When the leaf is off the tree about the middle of March, he deems his occupation gone, and he leaves the object of his former excessive care to shift for itself, thinking of nothing but the present ease, which may be summed up in a few words,—sloth, a bare subsistence, and an occasional debauch in his nectar, palm toddy. But with the rains returns his toil, and some little difficulty is experienced in procuring insects for a fresh campaign. If he can gather a dozen of promising cocoons, which his experience tells him are of females, he is quite satisfied. Carefully does he watch the bursting of the cocoon, and much care does he take of its winged inmate, having previously prepared for it a house of teak leaves dried. The male is not tardy in approaching. Impregnation takes place, the male dies, and in four days after laying her eggs, the female also. The eggs are in number about sixty; of these one-half prove abortive, while the others are hatched in ten days. The small insect is fed on the tender leaves of the Careya sphærica, and in six weeks spins its cocoon. The first brood are spared, and allowed to burst their cocoons to supply a sufficient quantity of ova for the tussah harvest. The same process as described is again gone through, with this exception, that the young worms are at this time fed on the leaves of the Pentaptera tomentosa, because those of the Careya sphærica are by this period of the season supposed to have acquired some influence noxious to the insect. It is during the progress of the worm from the egg to the formation of the cocoon that every energy of the tussah breeder is called into action for the preservation of his charge. Every animal, footed, winged, and creeping, is said to be the enemy of the tussah grub. Ants destroy them, kites and crows prey on them, snakes devour them, and squirrels are said to make a repast of them. To protect them first from their insect enemies, the tussah breeder ascends the 'muddy' tree (Terminalia tomentosa), the leaves of which are the insect's food, every branch he carefully clears of the different species of ants by which they may be infested, preventing the access of others by surrounding the trunk of the tree at its foot with ashes. The other enemies are kept off by shouting, throwing stones, firing guns, etc. Their life at this time would appear by their own

account to be one of the most unremitting toil, to devote themselves to which they forswear not only every indulgence but every comfort; and it rouses the apathetic peasant of Telingana to eloquence when he recounts what privations he undergoes, what pleasure he derives himself, and what incessant labour he incurs, while watching the rearing of the worm, and the perfecting of its work. The tussah butterfly is a species of Saturnia, probably the paphia, described by Dr. Helfer as the most common of the native species. From four to five hundred of the cocoons are sold to the banya and weavers for one rupee; the moth is killed by means of heat. There are three tussah harvests, one at the end of the rains, the other two in the cold season. The winding of the silk is accomplished by boiling the cocoons, separating the floss, of which no use is made, and twisting eight or ten filatures from as many cocoons on the middle of the thigh with the left hand of the workman, and to be wound on the instrument. This instrument, the middle bar of the wood, is held lightly in the hand of the workman, and made to move in a semicircle. An ounce and a quarter of silk is the average daily winding of a single workman. His wages are at the common rate of one pice for winding the silk of fifty cocoons, about three pice a day, as he cannot wind more silk than from a hundred and fifty cocoons. The pice, however, are large, and go there by eight to the rupee. The only dyes used for the tussah silk, so far at least as observation or inquiry has gone, are the flowers of the Butea frondosa and turmeric. By the former the usual familiar colour is produced; by the latter, golden-yellow is brought out after the threads are for some time immersed in a solution of ashes. The warp threads are stiffened with rice congee. Tussah is made into the saree, punchee, and scarfs, at several towns of the Circar of Warangal. But in the Dekhan, the chief seat of the tussah manufacture is the town of Madapore, on the right bank of the Godavery, in the Ramghur Circar, where the moth that yields it is carefully reared, and from whence raw tussah silk is sent to other parts to be woven into cloth. The tussah cloths produced at Madapore are, in durability and fineness, very inferior to the cloths of the same kind manufactured in Bengal. They are dyed the same colour, and with the same materials as the silks, of which they are about one-half the price. The Saturnia, which is most commonly met with in Southern India, appears to be S. paphia. The caterpillar feeds on the leaves of the country almond tree, Terminalia catappa, whence it is often called the almond moth. It is also found on the leaves of the ber tree, Zizyphus jujuba, the casuarina, etc. The cocoons are ingeniously attached to the twiggy branches of the zizyphus by a long stalk terminating in a ring, encircling the branch. It does not appear that silk in any quantity has been obtained from this source in the Madras Presidency. There, the only use to which the cocoons appear to be turned, is that of a ligature for native matchlocks. They are cut spirally into long narrow bands, with which the barrels are tied to the stocks. Considerable quantities of the small silk cloths worn by Brahmans at their meals are imported into the Northern Circars from Cuttack. Dr. Roxburgh, in the 7th vol. of the Linnean Transactions, described the preparation of the tussah silk of Bengal, derived there from two different species of Saturnia. One, called Bughy by the natives of Birbhum, appears to be the same as the Madras species (S. paphia), and is stated to feed on the ber tree and on the asana, Pentaptera glabra. The other, termed Jaru by the natives of the same province, is the S. cynthia, and is domesticated. The caterpillars are fed on the leaves of the castor-oil plant (Ricinus), whence it is called the arundy or arundi silk-worm, but it also eats the leaves of the zizyphus and Terminalia tomentosa. Colonel Sykes, writing in the 3d vol. of the Trans. Roy. As. Socy. Lond., on the cocoons of S. paphia found by him in the Dekhan, under the designation of the kaliswar silk-worm, stated that it is met with on the ber tree, Terminalia glabra, teak tree, and common mulberry. The Chinese tussah is said to be obtained from Saturnia atlas, which is also to be met with in Southern India. Another species of Saturnia (S. selene), the posterior wings of which are prolonged into a tail-like process, is common in Southern India. The caterpillar may be observed feeding in considerable numbers on the Odina wodier, or Be-sharm tree, in February and March. Its chrysalis is enveloped in a silky covering, so like that of S. paphia that it would probably be found to yield a strong and useful thread. It might be worth while to direct attention to the silk spun by several smaller specimens of Bombyx moths, found on different species of cassia, acacia, and phyllanthus. A gregarious caterpillar (a species of Lasiocampus) may be observed clustering in great numbers on the stem of the guava, the jamoon (Syzygium jambolanum), and probably other trees. The silky covering of these also seems deserving of examination.—*Tennent's Ceylon*, p. 427; *Dr. Walker in Madras Jour. Lit. and Science; Jury Rep. Madras Exh.*, 1855; *Mr. Rohde's MSS.; Major Cuth.; Davidson; Rapport du Science, Jury mixte International*, p. 54. See Silk.

TUSSAWOOF, the theology of the Sufi Muhammadans, also the Sufi sect, an order of religious devotees. Mysticism, contemplation.

TUSSILAGO FARFARA. *Linn.* Colt's-foot, Eng.; Watpan, Hind. This is not uncommon in many places in the Panjab Himalaya, at from 5000 to 11,000 feet. It grows also in Persia, in chalky soils in England, and is found in many parts of Europe. The plant is mucilaginous and slightly bitter, and may be employed as a demulcent possessed of a little tonic property. Its leaves are sometimes applied to wounds. It may be prescribed in the form of an infusion or decoction, one or two ounces to a pint of water.—*Royle; O'Sh.; Stewart.*

TU-TA-BAT. Burm. On the annexation of Pegu by the British, the king of Burma lost the royal garden, which is a few miles out from the village of Twantay, in which the celebrated tu-ta-bat tree grows. In that locality there are some dozen or more of these trees, which furnished the royal table with the tu-ta-bat fruit. The appearance of the tree is not unlike that of the common jack. It is said to be the Sapodilla plum, which grows in abundance in the West Indies, and has a most luscious taste. The Burmese tu-ta-bat is about the size of a large guava, and resembles it in shape. When ripe, it has a green-olive colour, and inside are four long

bean-like seeds of a dark-brown colour, which are surrounded by a mealy pulp. The taste of the pulp is not unlike a doorian, but it has none of the smell of that well-known fruit. It leaves a little astringency and pungency on the tongue and palate. The flavour is that of a ripe mellow plum. This fruit is scarce, and is presented mostly as offering to the Phoungyes. The keeper of the Twantay Garden and all his children were formerly charged not to eat a single plum, on pain of immediate execution. All the fruit was picked and sent up to the capital, by express boats, for use in the palace. If a Burman only pointed his finger at a tree, he would be severely punished for it. To point a finger at one was to spoil fruit intended to be eaten only by the king and members of the royal household.

TUTENAGUE, Shan-tung, CHIN., or China spelter, is an alloy of iron, copper, and zinc. It is harder than zinc, though less so than iron, sonorous, compact, and has some malleability. The fresh fracture is brilliant, but soon tarnishes. Till superseded by spelter from Silesia, it was clandestinely exported in large quantities (more than 50,000 cwt. annually) to India, but is now seldom or never shipped, spelter being, on the contrary, imported to compete with it in China. For boxes, dishes, household utensils, and other similar purposes, tutenague is well adapted. Its export price used to be about 14 dollars a pikul. One proportion is said to be 8 parts of copper, 3 of nickel, and 6½ of zinc, which gives a fusible alloy, very hard, and not easily rolled, but well adapted for casting.—*Simmonds' Dict.; Morrison.*

TUTI, HIND., is the long, silky, hemp-like fibre of three species of Abutilon, the A. tomentosum, A. polyandrum, and A. Indicum.

TUTICORIN, an important town on the Indian side of the Gulf of Manaar. Its neighbouring banks yield the pearl oyster and chank shells. Its harbour is sheltered by a line of low islands, but is only fit for small vessels. The Dutch obelisk light is in lat. 8° 47′ 17″ N., and long. 78° 11′ 17″ E. It is inhabited mostly by the Parawa race, who are fishermen. Trade has much increased since the opening, in 1875, of the South Indian Railway, of which Tuticorin is a terminus. The lighthouse on Hare Island was built in 1874. The pearl and chank (conch) shell fisheries have been noticed under Tinnevelly district. The port-master is superintendent of pearl fisheries.—*Findlay; Imp. Gaz.*

TUTIYA. HIND., PERS. A metallic salt. Nila-tutiya is the sulphate of copper, or blue vitriol. Hira-tutiya, also called Hira-kasis, is the sulphate of iron, or green vitriol; Safed-tutiya is the sulphate of zinc.

TUZAK-i-BABARI or Wakiat-i-Babari, commentaries of Baber.—*Elliot.* See Baber.

TWASHTRI, a deity of the Rig Veda, the analogue of Hephaistos and Vulcan, a skilful workman, the vivifier and bestower of long life, who imparts generative power, and bestows offspring. He developes the seminal germ in the womb. He has given form to all life. His son Viswa-rupa or Tri-siras was slain by Indra. His daughter Saranyu was married to Vivaswat, and was mother of the Aswins. It is also written Twashta.—*Dowson.* See Visvakarma.

TWEEDDALE. Arthur Hay, ninth Marquis of Tweeddale, was the second son of the eighth Marquis of Tweeddale. Born in 1824, and died in 1878. In 1841 he entered the Grenadier Guards. He served on the staff of Lord Hardinge in India, being aide-de-camp through the Sutlej campaign (1845–46), and was present at the battles of Ferozeshah and Sobraon, and after the peace he travelled in India, visiting Ladakh. He served with his regiment during the Crimean War, but in 1860 he obtained his colonelcy, and six years later he retired from the army, having exchanged into the 17th Lancers. By the death of his elder brother, Lord Gifford, in 1862, he became heir to the Marquisate of Tweeddale, but, in deference to the feelings of his brother's widow, he assumed the second instead of the senior title in the succession, and took the style of Viscount Walden. He brought together a fine collection of birds, and was reckoned among the foremost ornithologists of Europe. At his own expense he sent out collectors to the Malay and Philippine Islands; and in the Ibis and in the Proceedings of the Zoological Society, of which he was president, he published important memoirs. From 1870 to 1878 he was very constantly engaged in ornithological work, and he was always ready to give to others both advice and information.

TWENTY-FOUR PARGANAS form the metropolitan district of the Lieutenant-Governorship of Bengal. It forms the south-western district of the Presidency division. 1881, 1,618,420, exclusive of the town and suburb of Calcutta; or, inclusive of that city, 2,303,078 souls. The administrative headquarters of the district are at Alipur, a southern suburb of Calcutta. The seven principal rivers are the Hoogly, Bidyadhare, Piali, Kalindi, Jamuna or Ichhamati, Kholpatua, and Kabadak, all navigable by the largest native boats throughout the year; besides the great estuaries in the Sunderbans. The British obtained it from the Muhammadans by the treaty of the 20th December 1757, by which the Nawab Nazim of Bengal, Mir Jafar, ceded it to the East India Company. Rice forms the staple crop of the district.

TWICE BORN. See Dwaija.

TWINING, WILLIAM, a medical officer of Bengal, who was long employed in the General Hospital there, author of Clinical Illustrations of the more important Diseases of Bengal, with the Result of an Inquiry into their Pathology and Treatment, Calcutta 1832 and 1835; A Practical Account of Epidemic Cholera, and of the Treatment requisite in the various Modifications.

TWINS. The human female has usually one child at a birth. Twins occur once in 150 to 200 births. The Saliva Indians on the Orinoco believe that a woman who bears twins must have been guilty of adultery. In the island of Bali, twins are regarded as an unlucky omen, and all the family are placed outside the village for a month. Amongst the Khasiya race, one of the twins was immediately killed. The same custom holds amongst the Aino of Japan. At Arebo in Guinea, the mother and her twins are all killed. At Nguru, near Unyanyembe, one of the twins is killed.—*Peschel.*

TYCOON, Zeogun, or Kobo, the great temporal ruler of Japan. It was a title assumed by the ruling princes of Tokugawa Shoguns. Tai-kun signifies great or exalted ruler.—*Sir J. E. Reed.*

TYEB. ARAB. That part of the Muhammadan creed containing the words, There is no deity but God, etc.

TYE-TINCO, the refuse of opium, used by the poorest Chinese in Singapore.

TYLOPHORA ASTHMATICA. *W. and A.*

Asclepias asthmatica, *Roxb.*	Cynanchum ipecacuanha, *Willd.*
A. vomitoria, *Koen.*	
A. pubescens, *Wall.*	C. vomitorium, *Sims.*
Tylophora pubescens, *Wall.*	Hova planiflora, *Wall.*
T. vomitoria, *Voigt.*	
Untamol, . . . HIND.	Kaka pala, . TAM., TEL.
Kodigam, . . . TAM.	Kukka pala, . ,, ,,
Kurinja, ... ,,	Verri pala, . . ,, ,,

Grows abundantly in the south of India and in Bengal. The root is of many long, thick, whitish fleshy fibres, issuing from a small woody head. The dried roots of this article afford an excellent substitute for ipecacuanha, if given in rather larger doses. It is said to be valuable in dysentery. This plant yields the kurinja fibre of Tanjore, which affords a good substitute for flax, is of fine quality, white, strong, and silky. Untamol, bark of the root of Tylophora asthmatica, must not be confounded with Ununtamul, the root of Hemidesmus Indicus.—*O'Sh.*

TYPHACEÆ. *D. C.* The bulrush tribe of plants, including marsh or ditch plants, comprising the two genera Sparganium and Typha, known in Sind as Pun and Buri. Of the former, one species occurs in Kashmir, and three species of Typha occur in India. At Trichinopoly, figures and architectural models are carved in the pith of the Typha elephantina. The attitudes of the figures are stiff, but the draperies are characteristic. There are pith models of the pagodas of Trichinopoly and Salem, and pith-work made from the rushes called Nultee in Tanjore, with a model of the pagoda. Cibotium Billardieri (the Dicksonia Antarctica of La Billardiere) contains an edible pith or bread-fruit, eaten by the natives of Australia. Typha bread is prepared in Sind from the pollen of the flowers of the Typha elephantina, and in New Zealand from another species of bulrush, Typha utilis.—*Powell; Voigt; Roxb.; Stewart; Royle.*

TYPHA ANGUSTIFOLIA. *Linn.*
Typha latifolia, *Willde.*

Boj, ... BEAS.	Dipa, Dab, . . PANJ.
Bulrush, Cat's-tail, ENG.	Kundar, Patira, . ,,
Reed mace, . . . ,,	Reree, ... SIND.
Pitz, Yira, . KASHMIR.	Lukh, . TRANS-INDUS.

This species is common in marshes, etc., in moist parts of the Panjab plains, at about 4000 feet in Kullu, and up to the Kashmir valley (5000 feet). The roots are eaten in Kashmir; and on the Sutlej the lower succulent part of the stem is used for clearing the water of the swollen river, which it does speedily and effectually. In some places, also, they are made into boat ropes, which it is said will last a month; also the leaves are woven into mats and baskets. In Peshawur, and probably elsewhere, the down of the ripe fruit (not the flower, as mentioned by Vigne) is used to bind mortar for wall plaster. —*Stewart; Powell; Royle.*

TYPHA BUNGEANA, *Tatarinov*, Hiang-p'u, CHIN., is a bulrush of the south of China.

TYPHA ELEPHANTINA. *Roxb.* Dib grass.

Hogla, ... BENG.	Putera, Dib, . . SIND.
Elephant grass, . ENG.	Bur, Buri, Bori, . ,,
Pun, ... PANJ.	Jammu gaddi, . . TEL.

This bulrush grows along the river banks and margins of tanks; its leaves, called pun, are employed in making mats and baskets in North-West India, also rude boats (tirhó). The pollen, like Lycopodium, is inflammable, and is collected in Sind, and there called Buri. The term Bori is, however, also given to a sweetmeat of Dehra Ghazi Khan, a curious substance in yellow lumps, consisting of the pollen of the dib grass, of the Typha elephantina, and of T. angustifolia collected and kneaded together, perhaps with the aid of a little treacle or sugar. Its long, tortuous, and strong roots penetrate the soil to the depth of 6 or 8 feet, and hold it together. Mr. Murray says the lower succulent part of the stem is used to clear turbid water.—*Murray; Powell; Royle.*

TYPHON, one of the Egyptian triad, brother of Osiris and Horus.

TYPHONIUM ORIXENSE. *Schott.*

Arum orixense, *Roxb.*	A. trilobatum, *Lour.*
Ghet-kuchoo, . . BENG.	Suri-kanda, . . . TEL.
Ghekool, ... TEL.	

Grows throughout the East Indies, common in the shady mango groves near Samulcotta, and where the soil is dry and fertile. The other species are T. divaricatum, T. flagelliforme, T. sylvaticum, and T. trilobatum. The root of T. flagelliforme (Ghas-kuchoo) is boiled in milk, and given in consumption. The roots of T. orixense are used in poultices as a counter-irritant. The tubers are exceedingly acrid while fresh, and are used as an application in snake-bites. They are likewise given internally in doses of from 20 to 30 grains. Roxburgh describes this Arum as a most powerful stimulant in proper hands. A poultice of this Orissa arum, bruised to pulp with tepid water, is a stimulant rubefacient and counter-irritant, applied to indolent buboes and tumours by the native practitioners, and with frequent advantage.—*Voigt; O'Sh.*

Typhonium sylvaticum, *Schott.*

Amorphophallus sylvaticus.	Arum sylvaticum, *Roxb.*
	Adavi chama, . . TEL.

TYPHOON, from Typhon, the north wind.

Tufan, . ARAB., HIND.	Zephon, ... HEB.
Ti-fan, Ty-fung, . CHIN.	Bagui, . . PHILIPPINE.
τυφων, ... GR.	

The original meaning of the storm wind, Zephon, is north wind. Typhoon is, however, said to be a word of Chinese origin, from Ta, great, and Fung, tempest. It may, however, also be from the Arabic Tufan, a storm, and that from the Arabic root Taof, he did turn.

Typhoon is the European name of the frightful equinoctial gales which vex sea and land about the tropics, in the Eastern Archipelago, and down as far as to 10 degs. from the equator. The whole Malayan Archipelago is excluded from their sphere, while the whole of the Philippine is within it, the island of Mindano alone excepted. Typhoons, cyclones, and tornadoes are great rotatory winds that move along a curved line in increasing circles, sometimes centripetal. In the northern hemisphere, the rotatory movement follows a direction contrary to that of the hands of a clock; while the opposite takes place in the southern hemisphere. They occur in the northern part of the China Sea, along the southern and eastern coasts of China, near Formosa, the Bashee Islands, the north end of Luconia, and to the eastwards of these islands, and betwixt

Formosa and the Japan Archipelago. They are dangerous tempests, seldom reach beyond lat. 14° N. They generally blow with the greatest fury near the land, and most violently in June and July. They occur in both monsoons; and though between December and May they are rare, furious gusts occasionally occur in November, and in August, September, and October they likewise occur. For several years, when the change or perigee of the moon has coincided with the 21st and 22d September equinox, violent ty-fungs occurred. They frequently commence without warning. The marine barometer affords the best indication, and its fall has been noticed to extend from 29·65″ to below 27°. They usually commence between N.W. and N., and veer suddenly to N.E. and E., raising the sea in turbulent pyramids, which infringe violently on each other; as the wind veers to the south, the gale moderates. Near the coast of China a contrary motion often takes place, veering to the N.W. and W., changes to the S.W. In Keung-chow (Hainan) and the opposite peninsula called Lui-chew, or the region of thunder, temples are dedicated to the typhoon, the god of which they call Kew-woo, the typhoon mother.—*Horsburgh.* See Hurricane; Winds.

TYRE. The Hebrew writer, speaking of Tyre, says, 'Arabia, and all the princes of Kedar, they occupied with thee in lambs, and rams, and goats: in these were they thy merchants. The merchants of Sheba and Raamah, they were thy merchants: they occupied in thy fairs with chief of all spices, and with all precious stones and gold. Haran, and Canneh, and Eden, the merchants of Sheba, Asshur, and Chilmad, were thy merchants' (see Ezekiel xxvii. 21-23).

According to Justin, the ancient city of Tyre, the most celebrated of the cities of Phœnicia, and once the emporium of the world, the modern Sur, was founded by a colony of Sidonians, who fled thither when the king of Askelon captured their city, and the date of its foundation was the year before the sack of Troy. The prophet Isaiah calls her 'the daughter of Sidon.' 'Tradunt historiæ,' says St. Jerome, 'quod Tyrus colonia Sidonis sit.'

According to Herodotus (lib. 2, c. 44), Tyre was founded B.C. 2760. But the first year of New Island Tyre was B.C. 1254. Its total destruction, which had been foretold by the prophets with extreme minuteness, was effected by the Assyrians under Nebuchadnezzar, B.C. 573, after 13 years' siege, one of the longest recorded in history.

Subsequently, Alexander the Great made himself master of the whole of Syria and a part of Phœnicia, but Tyre (the insular town) still offered an obstinate resistance to his victorious arms. Irritated by several unsuccessful attempts to storm it by sea, he conceived the bold design of filling up the channel which separated it from the continent. This was effected by sinking piles into the sea, and throwing into the intervening space immense blocks of stone. The ruins of the ancient city afforded ready materials for the purpose. The whole was covered with sand, yet it was only after seven months' close siege that the inhabitants, attacked simultaneously by sea and by land, and the town being set on fire, surrendered to the Macedonian chief. When Tyre fell into the hands of Alexander (B.C. 332, and about 260 after the time of Ezekiel), that city was in full possession of the Indian commerce. It recovered its commercial importance, and was a flourishing city under the successors of Alexander. Nor did it cease with the Roman conquest. The emperor Hadrian repaired the fortifications, and made it the metropolis of a province, giving it all the advantages of a Roman colony. From the dominion of Rome it subsequently fell into the hands of the Saracens, about A.D. 639, who remained a long while in possession of it. It was taken by the Crusaders in 1124, after five months' siege, but they were forced to surrender it in their turn to the Mamluk of Egypt. Frederick the First, surnamed Barbarossa, was interred here. Tyre was the birthplace and residence of many persons celebrated in history. Hiram, one of its kings, was the friend of David and Solomon. He contributed to the construction of the great temple. The place is now known to the natives by its ancient Hebrew name of Sur, corrupted by the Greeks into Tyrus, and by the Romans into Serra.—*Robinson's Travels*, i. p. 260.

TZE-FAN, a district not far from Ta-li-fu. The Tze-fan tribe inhabiting it closely resemble the Chinese in feature, dress, and mode of life. Although industrious cultivators, they bear an evil renown as treacherous and martial banditti.

TZEREMISH are the original inhabitants of the provinces of Cazan and O-se-ta-our-han. After the Russians had made themselves masters of all these places, this people still continued to occupy the country to the left of Cazan, but they have been in subjection to the Russians for a hundred years. They resemble the Tartars in their external appearance, and they also wear their hair short, but their language is totally distinct, and they spring from a different origin. —*Staunton's Narrative*, p. 126.

U

U is the 21st letter and fifth vowel of the English alphabet. Its primary sound in Anglo-Saxon was the sound it still retains in most of the languages of Europe, as in the letters oo in cool, tool. This sound was changed to that of u in the words use, tube, etc., and it has now two other sounds, as in the English words but and bull. The sounds of the letters u and v are confounded in many languages. Dr. Gilchrist proposed for the Urdu and other tongues to use ŭ short ū for the sound of the letter ă short. This has been followed by many writers on India and its products, but, though congenial to the practice in the English language, with many and great inconveniences, the greatest being that of employing the letter u to represent the a of other tongues. The English letter a, as representing this short vowel, constitutes a stumbling-block in the way of English articulation, which it is almost impossible to overcome. It is very difficult, almost impossible, to induce an English reader to pronounce Măn as if written Mun; Păn as Pun, Săb as Sub, T'hăg as T'hug; and the only mode of learning the correct pronunciation is to hear the tongue spoken. The English letter u is, of all the letters of that alphabet,

the most difficult to utilize in writing a foreign tongue, the sounds of ŭ being like ă, and of ū being like oo. In this Cyclopædia, therefore, being a book of reference, some words may be found given twice over, with the initials A and U, and medial letters a and u. Dr. Gilchrist's plan was by far the best, so far as pronunciation was concerned, but the worst in a scientific point of view.

UBALA CHAWAL or Oobala Chawal, Hind., lit. boiled rice, is rice which has been boiled in the husk, and then husked. All Muhammadans and many Hindus in the Peninsula of India use ubala chawal.

UBHATA, a Hindu physician who compiled a medical work, principally from the writings of Charaka and Susruta. It is known in the West Peninsula of India as the Ashtanga Hirudayam, and there his name is written Babhata. He was a native of Kashmir. His commentary is written in a clear style, and he gives explanations of obscure passages in the original authors. He is supposed to have lived in the 12th or 13th centuries A.D.

UBO. Burm. A worship day, of which in a month there are four, viz. at change and full moon, and at eighth of waxing and waning.

UCHH, an ancient town in Bahawulpur State, Panjab, situated on the eastern bank of the Panjnad river, 70 miles south-south-west of Multan, and 40 miles north-east of the present confluence of the Panjnad with the Indus at Mithankot, in lat. 29° 13′ N., and long. 71° 9′ E. (?) General Cunningham has identified Uchh with the city which Alexander the Great built near the meeting of the Panjab rivers. He believes that it is also the town mentioned by Rashid-ud-Din as the capital of one of the four principalities of Sind under Ayand, the son of Kafand, who reigned after Alexander. Uchh was captured by Mahmud of Ghazni, and by Muhammad Ghori, and was the chief city of Upper Sind under Nasir-ud-Din Kubāchah. Uchh is now an agglomeration of ruins representing successive cities built at widely different dates. It contains the tombs of many sanctified Muhammadans, from which it gets the title of Uchh-i-Sharif, and one of the ruined towns is styled Pir-ka-Uchh.—*Imp. Gaz.; Mohun Lal, Tr.* p. 453.

UCHWALA, a spirituous gruel of Sikkim, made from Eleusine coracana.

UD. Arab. Any wood or timber frankincense, from species of the Aquilaria genus of plants, also the fragrant wood yielded by them, known as aloes-wood, eagle-wood.

Ud-i-farsi, Aquilaria agallocha, Persian eagle-wood.

Ud-i-Hindi, eagle-wood of India.

Ud-i-Kimari, agallocha-wood, eagle-wood of the hills.

Ud-i-Samudri, eagle-wood of the sea.

Ud-i-bukhoor, eagle-wood.

Ud-i-Chini, eagle-wood of China. Ud in India is the name applied to benjamin; and in Persia, to wood-aloes. Ud-batti are pastiles made of various fragrant vegetable substances, wood-aloes, sandal-wood, benjamin, Lichen rotundatus, patchouli, talisputree (Flacourtia cataphracta), gum mastic, sugar-candy, and gum, pounded fine and formed into pastiles. They are made in every large town, and burnt for the fragrance they give out. Ud-batti-ka-ekka, a metallic receptacle for pastiles. Ud-batti-ka-jhar, a tree formed of benjamin pastiles. Ud-dan, a box for holding frankincense.

Ud-i-balessan, Hind., is supposed to be the wood of Balsamodendron kafal, a tree of Arabia, an article of considerable traffic.

UDAI, the people known to the Binua of Jahore as the Oran Pago. See Kedah.

UDAIPUR (Oodeypore), capital of the Native State of Mewar, in Rajputana, in lat. 24° 35′ 19″ N., and long. 73° 43′ 23″ E. Udaipur means The City of the Sunrise. See Mewar.

UDAIPUR, a Native State in Chutia Nagpur, in Bengal, between lat. 22° 3′ 30″ and 22° 47′ N., and long. 83° 4′ 30″ and 83° 49′ 30″ E.; area, 1051 square miles, and a population (1872) of 27,708 souls. Udaipur is bounded on the north by Sirguja; on the east by the British district of Raigarh in the Central Provinces, and the State of Jushpur; on the south by Raigarh; and on the west by the district of Bilaspur. Gold and iron are found in small quantities; and within the boundaries of Udaipur lies a portion of one of the most extensive coal-fields in India. In 1860, the State was conferred on a brother of the raja of Sirguja, for good service during the mutiny.—*Imp. Gaz.*

UDAIPUR TOWN, in Hill Tiperah State, Bengal, in lat. 23° 31′ 25″ N., and long. 91° 31′ 10″ E., on the south or left bank of the Goomti, a few miles lower down the river than Old Udaipur, the former capital of the State, and the ancient residence of the rajas.—*Imp. Gaz.*

UDAIYAR. Tam. Generally written Waddiyar. A title borne by some Hindu tribes; it was that of the rajas of Coorg.

UDAKA-KRIYA. Sansk. The ceremony amongst the Hindus of offering a libation of water to deceased ancestors, as far as the fourteenth in affinity.

UDAKEA, a musical instrument of the Singhalese, the beating of which is prohibited, by a local ordinance, between the hours of 8 P.M. and 8 A.M.; the Indian tom-tom.—*Sirr's Ceylon.*

UDAN, sacred dialogues on the attributes of Buddhas.

UDANAVARGA is the northern Buddhist version of the Dhamma pada. It is in the Tibetan language, and has been translated into English in 1883 by Mr. W. W. Rockhill. It is well known in the Southern Canon under the name of Dhamma pada.

UDASI, Sansk., the dejected, a sect of devotees, one of the sects of the Sikhs, established by Dharmachand or Sri Chand, son of Nanak. The sect is widely diffused, and all are proud of their connection with the Sikhs, and are, among Sikhs, similar to Sanyasi among Hindus. They reside in monasteries, and eat what is cooked by other persons. The Udasi are recruited from all Hindu castes. The ceremony of discipleship is similar to that existing among gossains. Like bairagi and gossain, they have five akhara or places of assembly in Benares, known as Niranjani, Nirbani, Gudar, Sukhar, and Rukhar. Like them, also, some of their number are termed Naga (from Nanga, naked), because they go naked.—*As. Res.* xviii. p. 282; *Sherring's Hindu Tribes*, p. 268.

UDAYAGIRI and Khandgiri, two towns in

Cuttack, celebrated for their Buddhist caves, separated from each other by a narrow gorge. They are five miles W. of Bhuvaneswar, and contain numerous inscriptions. In the older inscriptions the language is Old Pali, and character Old Lat; they were prior to the 2d or 3d century, and make mention of Buddhist saints. The caves are stated to be excavated by Kalinga rajas. Five of the emblems found on the Buddhist coins are met with in these inscriptions, and a new form of the Bo Tree. Some of the more modern inscriptions are in Sanskrit, and are of the 5th or 6th century A.D. One of the 10th century, Samvat 9, which, if of the Gaur era, would be A.D. 1132. The character used in inscriptions is Kutila. The inscription of the 10th century, in Sanskrit, speaks of an equitable prince having the cave excavated within the sacred precincts of Jaganath for the holy ascetics. In the 10th and 11th centuries, therefore, Jaganath was worshipped. One cave at Udayagiri, known as the Tiger Cave, stands out from the hill in the form of a beast's jaw, with the teeth overhanging the entrance to the cell.—*Imp. Gaz.*

UDIKI or Wudiki. KARN. Marrying a widow, allowed by the low castes.

UDIPI, in South Canara district of the Madras Presidency, in lat. 13° 20′ 30″ N., and long. 74° 47′ E.; pop. (1871), 3857, is considered by Hindus to be the most sacred spot in the Canarese country, and is much frequented by pilgrims from Mysore. There are eight maths or Hindu monasteries; and the management of the temple, which is very ancient and largely endowed, is held by the heads of these maths in rotation, for two years each.—*Imp. Gaz.*

UDI-SAGAR, a lake of Rajputana. There are in reality three lakes, one at the villa of Suhailea-ki-bari, then the Peshola or inner lake, which is 80 feet above the Udi-sagar lake, the outlet of which is the Bairis river. The Peshola is fed from the little lake at Suhailea-ki-bari, and the Peshola is the feeder of the Udi-sagar. Both the Peshola and Udi-sagar are from 12 to 14 miles in circumference, and some places 35 feet deep, and, being fed from the perennial streams of the Aravalli, they contain a constant supply of water. It would be easy and inexpensive to lead a channel from the Udi-sagar to Chitore, as the fall is slight, and few locks would be required. The Bairis river issues from the Udi-sagar lake of Rajputuna, and passes within a mile of Chitore. There are thus two grand reservoirs within 6 miles of each other, the Peshola, or internal lake, having an elevation of 80 feet above the external one; and the Udi-sagar, whose outlet forms the Bairis. The Peshola may be called the parent of the other, although it is partly fed by the minor lake at the villa of Suhailea-ki-bari.—*Tod's Rajasthan*, ii. p. 627.

UGRADHANWA, one of Nanda's younger sons, who succeeded his father. He was cursed by a Brahman. He ordered all the brothers of Chandragupta to be put to death.—*As. Res.* v. 265.

UGRO-ALTAIC, a family of languages, which have been also designated Ural-Altaic, Ugro-Japanese (Logan), Ugro-Tartarian, Ugro-Turanian, and Turanian. Its limits are not settled. Dr. Edkins connects Chinese with Mongol roots. Others question the affinity of Mongol itself to the Tatar-Finnic languages.

The term Turanian is used in opposition to Iranian, and is applied to the nomadic races of Asia as opposed to the agricultural or Aryan races. The Turanian family or class consists of two great divisions. The northern is sometimes called the Ural-Altaic or Ugro-Tartaric, and it is divided into five sections—the Tungusic, Mongolic, Turkic, Finnic, and Samoyedic. The southern, which occupies the south of Asia, is divided into four classes,—the Tamilic, or the languages of the Dekhan; the Bhotiya, or the dialects of Tibet and Bhutan; the Taic, or the dialects of Siam; and the Malaic, or the Malay and Polynesian dialects.

By the term Ugro-Japanese, Mr. Logan designates the principal languages from the Fin and Magyar on the west to the Japanese on the east, and which have many phonetic characters in common, particularly that of vocalic harmony. They are the Fin, Hungarian, Turkish, Samoyede, Yenisian, Corean, Koriak, Tungusian, Kamtschatka, Mongol, Yukahiri, Japanese, Ainochukchi, Uigur, Manchu.

The Ugro-Tartarian languages of High Asia and other regions, which other writers style Turanian, are those of Dr. Pritchard's second group of nations belonging to the same great family, and include the various hordes who have been known under the names of Tartar, Turk, Mongol, Manchu, and Tungus. All these nations appear, from the result of late researches, to be allied in descent, though long supposed to be quite separate. In the vast region of High Asia, extending from the chain of Altai to that of the Himalaya, are the pasture lands where, during immemorial ages, the nomadic tribes of that region have fed their flocks, and multiplied those hordes which from time to time descended in immense swarms on the fertile regions of Asia and of Europe. Perhaps the earliest of these invasions of the civilised world was that of the Hiung-nu, expelled from the borders of China by the powerful dynasty of the Han. These were the people who, after their inroad on the Gothic empire of Hermanrich, made their way, under Etzel or Attila, into the heart of France. Hordes from the same regions, under Toghrul Beg, and Seljuk, and Mahmud of Ghazni, and Chengiz, and Timur, and Othman, overwhelmed the khalifat and the empires of China, of Byzantium, and of Hindustan; and lineal descendants of the shepherds of High Asia still sit on the throne of Cyrus, and on that of the Great Constantine. As a branch of the Ugro-Tartarian, Dr. Pritchard speaks of some of the insular nations to the eastward of Asia and near the coast of the Pacific Ocean. The idiom of the islands comprised in the empire of Niphon, as well as that of the independent Liu-kiu Archipelago, bears some signs of affinity to those of the Ugro-Tartarian nations; and he adds that Mr. Norris had assured him that the principle of vocalic harmony and other phenomena of the Tartar languages prevail in the idiom of the Japanese and Liu-kiu Islands. As a seventh group of his Ugro-Tartarian, he classes the aboriginal inhabitants of India, who, he supposes, were expelled from Hindustan by the Brahmans and the Aryan people who accompanied them across the Indus, and retired, as it is supposed, on apparently insufficient proof, into the Dekhan. They still occupy the greater part of

that peninsula, and a portion at least of the island of Ceylon. Their idioms—the Tamil, the Telugu, and the Carnatica of the Mysore—are sister dialects of one speech; and he considered it likely that the languages of the mountain tribes of India, the Bhil, the Gond, the Toda, and others, belong to the same stock. Dr. Pritchard adds that Professor Rask had conjectured that these nations are also of the Tartar stock. Their language has some of the peculiarities of structure which have been pointed out. He also observes that there are some curious analogies between the Tamilian and other dialects of the Dekhan and the languages of Australia, with which we have obtained some acquaintance through the labours of Mr. Threlkeld and several other missionaries, and from the able researches of Captain Gray.—*Sayce*, i. p. 57; *Logan*.

UIGUR, a tribe of Mongol Tartars, called Hiung-nu or Hioung-nou by the Chinese, and known in Europe as the Ouighour, Ougre, Hunigur, Hongre, or Hun. They are the present inhabitants of Kashgar. They dispossessed the Yu-chi about B.C. 200, but about B.C. 60 became subject to China. In A.D. 94 the Chinese annexed the country. According to Prof. Vambery (Bokhara, p. 81), the Uigur are the most ancient of the Turkish tribes, and formerly inhabited a part of Chinese Tartary, which is now occupied by a mixed population of Turk, Mongol, and Kalmuk. The great Uigur horde in Eastern Turkestan became Muhammadans in A.D. 966. The Chinese call them Hoieke, Oihor, and Hoai Hoai. Towards the close of the 8th century A.D., the emperors of the Tang dynasty deported about a million of Uigur families from the neighbourhood of Kashgar, and settled them at Kan-su and Shen-si. About A.D. 966, these families embraced Muhammadanism, and under their chief Satuk they conquered Transoxiana, and carried away captive an immense number of Turks of the Turghai tribe. In 972 the majority of these captives were allowed to return to their homes, but many remained, and they were styled Turghani or Tunghani, signifying remnant, and corrupted into Dungen, but known to the Chinese as Uigur or Hoai Hoai. They are all Muhammadans, but dress like Chinese. They are abstemious, religious, quarrelsome, using the knife, but honest and fond of trade.

The Uigur writing character was the original source of those still used by the Mongol and Manchu, and was itself almost certainly derived from the Old Syriac character through the Nestorians. The modern Tartar characters are written (and, it is presumed, read) in vertical lines from top to bottom of the page, the lines succeeding each other from left to right. Captain Valikhanoff speaks of the language now in use at Kashgar as being Uigur, but it is not clear whether he means that this term is known to the natives.

They were the first who reduced the Turkish language to writing, borrowing the characters from the Nestorian Christians, who came to their country as early as the 4th century of our era. The manuscripts of this language, written in the characters mentioned, are therefore the most ancient and valuable data in investigating the history of Central Asia,—nay, of the whole Turkish race. But these monuments are of great scarcity. Vambery believes he has collected all that has been discovered of the Uigur language, though the Uigur had a literature and were very fond of books at a time when the western world was involved in ignorance and barbarism. The most valuable manuscript he obtained bears date 1069, and was written in Kashgar; it treats of ethics and political subjects, and forms a kind of manual of advice to kings how to govern with justice and success. It reveals the social condition of this people, and forms the basis of the later regulations by which all Turks are governed.—*Vambery; Russians in Central Asia*, p. 67; *Yule's Cathay*, i. p. 206; *Timkowski's Journey to Pekin*, i. pp. 6, 378, 379; *Captain Valikhanoff*.

UJA, third son of Seoji, a Rahtor Rajput of Kanouj, in a foray on the Saurashtra peninsula, slew Bekumsi, the Chamara chieftain of Okamundal, and established himself there. From that act his branch of the Rahtor became known as the Badhail.

UJJAIN or Ujjaiyini, a town in the Native State of Gwalior, the dominions of the maharaja Sindia, in Malwa, situated on the right bank of the river Sipra, in lat. 23° 11′ 10″ N., and long. 75° 51′ 45″ E. Ujjain was in ancient times the capital of Malwa, was one of the seven sacred cities of the Hindus, and the spot which marked the first meridian of Hindu geographers. It is stated to have been the seat of the viceroyalty of the famous Asoka during the reign of his father at Pataliputra (circ. B.C. 263), but it is best known in history as the capital of Vikramaditya. The neighbourhood of the city was, in 1658, the scene of the decisive battle between Aurangzeb and his brother Dara. The ruins of the ancient city are situated about a mile to the northward. It is also called Visala and Pashpakarandini. It is the ancient Avanti, a city noted in verses 28 and 31 of the Meghaduta. Hindu geographers make it their first meridian, and calculate their longitude from it. But the present city was preceded by an older one, now in ruins. Hunter supposed it had been overwhelmed by a shower of earth, Malcolm suggested it had been destroyed by a flood, but in the tradition of the people it was overturned by an earthquake.

The surface of the hill (of the old city), where it has not been ploughed and picked, is strewed with fragments of stone, just as would be expected in a place which had once been covered with houses; the broken pieces of trap being parts of walls of which the larger pieces have been taken away as materials for other buildings.

The ruins furnish so large a quantity of antiques, that the natives call the place Roza-ka-Sadabirta, and it is in truth a never-failing charity for the industrious poor. In the idle days of the rains the digging begins. The principal things found are glass, stone, and wooden beads, small jewels of little value, seals, (agate and cornelian), and a few women's ornaments; copper coins are numerous; next in number are the debased silver Gujerati ones. Pure silver rupees seem scarce, and gold mohurs are either secreted and melted when found, or they but rarely reward the searcher. The pilgrims carry away with them as relics what has been dug out of the Junagarh, and merchants mix with the real antiques every old bead or piece of copper which has an ancient look, and pass them off as genuine on the unsuspicious natives.

There are caves in the neighbouring hills known as Raja Bhirtri's hermitage, and a well near known as that of Bibi Mako.—*Dr. Buist in Trans. of the Bomb. Geog. Soc.* pp. 139-767; *Jour. of the Asiat. Soc. of Beng.; Williams' Story of Nala*, p. 116; *Captain Warren; Imp. Gaz.*

UJLA, or pure white Bhil of Mewar, will eat no white animal, and their grand abjuration is by the white ram.

UKHARA, Saiva mendicants, who drink spirituous liquors and eat meat; they appear to be the refuse of the mendicant Gudara, Sukhara, and Rukhara sects, who are said to be in general of mild and inoffensive manners. See Udasi.

UKKU TUNDU. CAN. The term applied to the steel ingots called wootz by Dr. Heyne.

ULEMA, plural Arabic of Alim, learned men; but particularly applied to a body of learned men of Turkey, who with a mufti are clergy and lawyers.—*Catafago.*

ULI and Uri is puri with p elided.—*Growse.*

UL-KUDI. TAM. Literally inside cultivators, whose ancestors had acquired a prescriptive right to their holdings.

ULMUS, the elm genus of plants of the natural order Ulmaceæ. Nearly 20 species of elms have been enumerated, of which 5 occur in India.

ULMUS ALTERNIFOLIA. *Roxb.* Tha-lai, BURM. One of the largest trees in the Pegu Province. It is found about towns and villages in the Prome district. Along with the rest of the class, this tree furnishes a valuable timber of a red colour, strong, and adapted for house-building. —*M'Clelland.*

ULMUS CAMPESTRIS. *L.*

U. Wallichiana, *Planch.*

Marun, Hembar, . BEAS.	Brari, Breri, . KASHMIR.
Marazh, Marari, CHENAB.	Brankul, . . . ,,
Kain, Kai, . . JHELUM.	Imbir, Shko, . SUTLEJ.

This elm tree is common, wild, in many parts of the Panjab Himalaya, up to the Indus, from 3500 to 9500 feet. It grows to a large size. Dr. Stewart saw one more than 16 feet in girth; and Dr. Cleghorn says that there are many fine trees in the upper parts of Kulu, 30 feet in girth, and that the wood is esteemed, but not that of U. erosa. Dr. Stewart says the wood is not valued by natives; but it is tough, is used in Kanawar for ark poles; and in Hazara it is light, strong, and useful for the panels of dog-carts, etc. The bark is very tough, and is used for bed string, and sandals made from it will last for two days under hard work. The leaves are a favourite fodder, and the trees are often very severely lopped on this account. —*Stewart, Panj. Pl.; Cleghorn's Panj. Rep.*

ULMUS EROSA.

Manyi, Maunu, . . BEAS.	Himburch, . . . KULU.
Meru, Chipal, . CHENAB.	Yumbok, . . . LADAKH.
Manu, Mannu, . JHELUM.	Maral, ... RAVI.
Bren, Bran, . KASHMIR.	Maldung morun, SUTLEJ.

This elm tree of the N.W. Himalaya is frequently seen planted near villages, etc. It reaches up to 100 feet in height, and from 20 to 30 feet in girth, on the Beas. It grows at from 2500 to 10,500 feet in Ladakh; the wood has not any special use; spines project from the wood of the trunk into the inner surface of the bark, as in Populus Euphratica. In parts of the Jhelum basin, gun-fuse is made from the bark.—*Stewart, Panj. Pl.*

ULMUS INTEGRIFOLIA. *Roxb. Cor. Pl.*

Holoptelœa integrifolia, *Planch.*

Kacham . . of AMBALA.	Dada-hirilla, . . SINGH.
Khulen, Rajain, . BEAS.	Aya maram, . . TAM.
Thalai, ... BURM.	Tambachi, Kanchy, ,,
Papri . . . . of DEHLI.	Navili, ... TEL.
Wowlee, ... MAHR.	

This fine large elm grows in Ceylon, throughout the Peninsula of India, in Hindustan, in the Panjab and N.W. Himalaya, and in Burma to the latitude of Prome. Its wood is of a reddish colour, is strong, much used for building purposes requiring toughness and strength, for carts, door-frames, spoons, and roof planks. The wood yields a peculiar odour to boiling water, which, when mixed with boiling arrack, imparts to it the flavour of the more expensive palmyra arrack. The forks of the branches are used to protect straw from cattle.—*Roxb.* ii. p. 68; *Wight; Stewart; Thw.; Beddome; Fergusson.*

ULSOOR, an artificial lake in Bangalore. Water is pumped from the tank by steam power into filtering cisterns, and allowed to flow by gravitation into a pure water basin, whence it is again lifted to the summit of a stand-pipe on the Ulsoor rock, sufficiently elevated to command effectively all the points at which it is required to be delivered.

ULTRA-INDIA, a term applied by geographers to the countries east of British India; the Hinter Indies of Carl Ritter; also called Further India.

ULTRAMARINE.

Bleu d'outremer, . . FR.	Oltramarino, ... IT.
Ultramarin, GER., RUS.	Ultramar, ... SP.
Lajvurd, . . GUJ., HIND.	

A very fine blue pigment made from the lapis-lazuli, and highly prized by painters. It is now artificially imitated in various ways.—*Faulkner; M'Clelland.*

ULUGH BEG, called Mirza Muhammad Targai, was a grandson of Timur. He was born A.D. 1394, killed 1449.

ULUS. TURK. A large family, a clan, a tribe, a sect. Applied in Afghanistan either to a whole tribe or to one of their independent branches. The word seems to mean a clanish commonwealth. An ulus is divided into several branches, each under its own chief, who is subordinate to the chief of the ulus. The chief of an ulus is called khan. He is always chosen from the oldest family of the ulus. In cases, the selection rests with the ruler of the country, who can remove a khan at pleasure, appointing one of his relations in his stead.—*Elphinstone's Caubul*, p. 159.

ULVA RETICULATA. *Forsk.* A very beautiful reticulated sea-weed of the Eastern Archipelago. See Algæ; Sea-Weed.

ULWAR or Alwar, capital of a Native State of the same name, in Rajputana, situated in lat. 27° 34′ 4″ N., and long. 76° 38′ 28″ E., nearly in the centre of the State. The area is about 3000 square miles; population (1871), 778,596, of whom 180,225 were Musalmans, 38 Christians, and the rest Hindus. Of agricultural castes, the Meos are by far the most numerous. Its subdivisions or districts are Raht, the Wal, with portions of Narukhand, of the Rajawat country, and of Mewat. Raht is the country of the Chauhan Rajputs, the head of whom claims to be the living representative of Prithi-raj. The Wal is on the west border, and is occupied by Rajputs of the Shekhawat clan, which is so important in Jeypore.

Ulwar State is composed of petty chiefships, which, till the middle of the 18th century, owed allegiance to Jeypore and Bhurtpur. The southern portion was usurped during the minority of the maharaja of Jeypore by Partab Singh, of the clan of Murookha Rajputs, about 1780. Macherry was conquered from Bhurtpur. Partab Singh was succeeded by his adopted son Buktawur Singh, with whom the first relations of the British Government were formed. Ahmad Bukhsh Khan, the Ulwar vakeel, joined Lord Lake at the commencement of the war with the Mahrattas, and received the grant of Loharoo from Ulwar, and of Ferozpur from Lord Lake, as a reward for his services. As a reward for the assistance which Ulwar rendered in the campaign, the districts which had been granted to Bhurtpur, and afterwards resumed, were conferred on the maharaoraja by a sunnud from Lord Lake. In 1805 an exchange of territories was effected with Ulwar for mutual convenience. The State pays no tribute or contribution to local corps or contingents; it maintains an army of 2000 infantry and 1500 cavalry. The chief has received the right of adoption, and he is entitled to a salute of fifteen guns. It was decided in 1862 that Neemrana is a fief of Ulwar.—*Treaties*, iv. p. 141.

UMA, a Hindu goddess. In the Kena Upanishad, she is first mentioned as a mediatrix between Brahma and the other Hindu gods. She is called Uma Haimavati It is supposed that she was the personification of divine knowledge, which came from Himavat, where scholars used to go and live to acquire this knowledge. Uma had several names. The Kumara Sambhava of Kalidasa gives an account of her birth and marriage. She was known as the Mountain Maid, and had taken a strong liking to Siva. She used to retire from the company of her parents, and, being sequestered in a 'bosky shade,' dedicated her soul to penance and prayer, in view to her union with Siva. On hearing of this, Siva sent a proposal to her father while she was seated with him. She blushingly consented to the proposal, and 'there were lotus petals in sweet maiden's guile.' She is known as a model wife.

Uma is the same with the Maya, Sakti, Prakriti of the Hindus, and with Io, Isis, Astarte, Ishtar, Myletta, Sara, Maia, Mary, Mariam, Juno, Venus, Diana, Artemis, Aphrodite, Hera, Rhea, Cybele, Ceres, Eve, Frea, Frigga of other nations, everywhere representing the female principle in creation, the universe, the mother of the gods, the spouse of god, the queen of heaven, and so forth, and the mother of god of the Mariolaters. One of the representations of Uma was as Kali, a nude female of a black complexion; and for her counterparts we have Diana of the Ephesians, Isis, Hecate, Juno, Meles, Ceres, Cybele, and Venus Melainis, all of whom were represented black. In the cathedral at Moulins, at the chapel at Loretto, at the churches of the annunciation, St. Lazar's and St. Stephen's at Genoa; at St. Francisco at Pisa, at Brisen in the Tyrol, and one in Padua; in St. Theodore at Munich, in the cathedral and church at Augsburg, in the Borghese chapel of Maria Maggiore, in the Pantheon, and in a small chapel of St. Peter's,—are to be seen (in Augsburg as large as life) a black virgin and a black child (Inman, ii. p. 263). There is a close analogy between the conception of Uma, the mother of the universe, and that of the Egyptian and Grecian goddesses, as also that of the Gnostics, the Rosicrucians, Mariolaters, and other mystics, whose influence on Christianity is still manifest in the traces they have left on the Roman Church.—*Calcutta Review*, No. 109, p. 29; *Garrett*.

UMAR, the second khalif after Mahomed, Mahomed's successors having, according to the sect of Sunni Muhammadans, been Abubakr, Umar, Usman, and Ali. He conquered Syria, and in A.D. 637 he besieged and took Jerusalem, after a defence of several months. In 638 he led a powerful army into Egypt, the conquest of which country was completed by the taking of Alexandria, 640. He instituted the era of the Hijira, or flight of Mahomed, and Muhammadans now use it. It began A.D. 16th July 622. He was assassinated by a Persian slave, A.D. 644, at Jerusalem, where his tomb is still shown. His memory is held in the highest veneration by the Sunni sect, but the Shiahs regard him as a usurper. It is Umar of whom the statement is made that he ordered the Alexandrian library to be burned.

UMAR II., grandson of Umar I., was the eighth khalif of the Ummiades. He succeeded the Khalifa Soliman, A.D. 717. He laid siege to Constantinople, but was forced to raise it, because of a violent storm which destroyed a great part of his fleet. He was poisoned A.D. 720.

UMAR-ibn-ul-FARID, a devout Muhammadan of Cairo. He was the author of many poems, which are remarkable both for their mastery of language and their subtle and beautiful thoughts. He was of moderate stature, but of very imposing presence; he was handsome, with a rather ruddy complexion, and when he took part in a zikr (*q.v.*), or became ecstatic, his features lit up, and a copious perspiration would cover his body. From early life he was accustomed to seek the solitude of Mount Mokattam, near Cairo; but, yielding to a vision, he went to the vicinity of Mecca, with his headquarters at ten days' journey from it. His poems are said to have been composed while in the ecstatic state. When excited, he would rush naked into the streets and recite portions of them, dancing as he did so wildly along, joined at every step by votaries who imitated his excited cries and gestures.

UMAR KHAYYAM, the astronomer poet of Persia. Several editions of his writings have been printed. He held that the outward forms of religion are matters of indifference. He says,

> 'Kaba or idol shrine, 'tis His house of prayer;
> Even ringing bells invite us to His shrine;
> Mosque or church, He is present there;
> Crescent or cross, 'tis Allah's sign.'

UMARKHER, chief town of a pargana of the same name in Basim district, Berar, lat. 19° 36′ N., long. 77° 45′ E.; population (1867), 5753. It has a police station, a dispensary, and a good school. An action was fought here in 1819 between the Hatkar chiefs and the Nizam's army.—*Imp. Gaz.*

UMARKOT, a town in the Thar and Parkar district of Sind, lat. 25° 21′ N., long. 69° 46′ E. It lies on the confines of the sand-hills forming the eastern desert; and a canal, known as the Umarkot branch, leading out from the Nara, now reaches the town, tailing off into a large tank. Its historical importance is due to its position on the main route from Hindustan to Sind. Akbar, son

of Humayun, then on his way to Afghanistan, was born here, October 1543. The presumed spot of Akbar's birth is marked by a stone slab with an inscription. Akbar marched through this town in A.D. 1591, to conquer Sind. In 1813 Umarkot was captured by the Talpur Mirs from the raja of Jodhpur, in whose possession it had been for some time; and after their downfall in 1843, it came into the hands of the British.

This stronghold or kote of the Umar tribe, was the capital of the Soda dominions, which extended, in the 17th century, into the valley of Sind, and east to the Luni; but the Rahtor of Marwar and the Talpur family reduced the sovereignty of the Soda to a very confined spot, and thrust out of Umarkot (the last of the nine castles of Maru) the descendant of Sehris, who, from Arore, held dominions extending from Kashmir to the ocean. Umarkot, during the opulence of the Soda princes, contained 5000 houses, but in the beginning of the 19th century it hardly reckoned 250 huts. The old castle, to the north-west of the town, is built of brick, and the bastions, said to be eighteen in number, are of stone. It is a place of some strength, and was considered so inaccessible from the desert that surrounds it, that the amirs of Sind allotted it as a place of security to deposit a part of their treasures. The old Rajput family of Umarkot is stated by Tod (Rajasthan, i. pp. 92, 93) to have been Pramar or Powar Rajputs.—*Tod's Rajasthan*, ii. p. 313; *Pottinger's Trs.* p. 401; *Imp. Gaz.*

UMAT-SURI, a mercantile festival held about the middle of July. It is a procession of trades and an exhibition of their wares, amongst which the wax-workers are very prominent.

UMBALLA, properly spelt Ambala, a British district in the Lieutenant-Governorship of the Panjab, lying between lat. 29° 49′ and 31° 12′ N., and between long. 76° 22′ and 77° 39′ E. Area, 2627 square miles; population in 1881, 68,238. Umballa and its neighbourhood are intimately associated with the earliest dawn of Indian history. The strip of country included between the Sarsuti (Saraswati) and the Ghaggar is the holy land of the Hindu faith, the first permanent home of the Aryans in India, and the spot where their religion took shape. Its banks are everywhere lined with shrines, but the towns of Thanesar and Pihoia form the chief centres of attraction, and a tank filled by the Sarsuti at the former place is annually bathed in, as a religious purificatory rite, by some 300,000 persons. The country teems with traditions of the great conflict between the Pandava and the Kaurava, whose exploits are detailed in the Mahabharata. Hiwen Thsang, the Chinese Buddhist pilgrim of the 7th century, found it the seat of a flourishing and civilised dominion, having its capital at Srugna. Srugna continued to be occupied down to the time of the Muhammadan conquest of the country. In 1872, Jat numbered 175,335, of whom 161,967 are Hindus or Sikhs, and 13,368 Musalmans. In the N. parganas the Jat form the chief proprietary body, and keep up their usual reputation for industry and frugality. The Chamars, 125,638, Hindus; its members may be found in all menial positions. The Gujars (48,695) are almost equally divided between Hinduism and Islam. As elsewhere, they are fonder of cattle-breeding than of agriculture, and show the ancestral tendency towards a wild, lawless life. The other leading tribes are the Banyas, 39,093; Kambohs, 9847; Syuds, 8490; Khattris, 7893; and Pathans, 7377. The inhabitants of the Kotaha pargana, in the hill country, are a simple, quiet race, clinging almost without exception to the Hindu faith of their forefathers, deeply devoted to their homes, and seldom visiting the plains. A family may be absent for a hundred years, yet their name will be held in remembrance and their descendants may return at any time to reclaim their possessions without a remonstrance.

UMBELLIFERÆ. *Juss.* The Apiaceæ of Lindley, the celery tribe of plants, were called Umbelliferæ from the arrangement of the flower-stalks in head or umbels. There are about 1500 species, all herbaceous, and abounding in temperate climates. The products of the group vary much in character. Celery, fennel, parsnip, carrot, and parsley are all familiar esculents belonging to the order. Upwards of a hundred species occur in the mountains and plains of India. Some are acrid and virulently poisonous; some abound in resins, containing a large quantity of an essential aromatic oil, and act as aromatics and stimulants; others yield fœtid gum-resins.

The laser or silphion of the ancients is secreted by plants belonging to this order; and asafœtida, galbanum, gum-ammoniacum, oppoponax, and sagapenum are much used as stimulant medicines in nervous diseases at the present day.—*Voigt.*

UMBILICUS MALACOPHYLLUS. *Smith.*

Tsoh, Yeh-ho-tsau, CHIN. | Uh-yu, Wa-sung, . CHIN.

This kind of house-leek is found in China on the tops of old houses. Its juice is employed to wash the hair of the head.—*Smith.*

UMBRELLA.

Payong, ... BURM.	Songsong, Paying, . JAV.
Kettisol (paper umbrellas), CHIN.	Bawat, ... ,,
	Payung, . . . MALAY.
Parapluie, ... FR.	Kodayal, ... TAM.
Chatri, . . GUJ., HIND.	Godugulu, . . . TEL.

Umbrellas are employed as a shade against the heat of the sun and rain; a smaller kind, the parasol, being used chiefly by ladies, either while walking or riding in open conveyances. The kettisol or paper summer head is extensively manufactured in China, whence it is largely exported to various parts of the world. In India, palm leaves spread over bamboos are largely used. The umbrella of the Lepcha in Sikkim consists of a framework of bamboo enclosing broad leaves of Phrynium. The umbrella has been a symbol of rank in eastern countries from the most ancient times. Ch'hatra-pati, lord of the umbrella, one of the titles of the ancient Persian kings, is supposed to be the word from which the Greeks and Romans obtained the title of Satrap, the Ekach'hatra, the vaulted horizontal sunshades, being reserved for royalty. Carpini notices that umbrellas, Solinum vel Tentoriolum in hasta, were held over the Tartar nobles and their wives when on horseback, and this is still an Indian custom. Adrian speaks of the Skiadia.

In most eastern countries, the right to use an umbrella is bestowed by sovereigns. Until recently, no native of India would have presumed to keep his umbrella spread, or his slippers on, while approaching a European, nor pass a European sentry with it. Those bestowed by sovereigns are of various shapes, and have various names. To use an umbrella at all, amongst Malays, or rather

to have it carried over one, for no native carries an umbrella himself, is a mark of rank, and its quality implies the degree of that rank. The sovereign alone uses one which is gilt throughout. In Java, a small umbrella, called a bawat, is the special badge of the higher nobility, called by the Sanskrit title of bopati. This is not made use of to protect from sun or rain, but carried by a retainer before the party.

A white umbrella is the emblem of sovereignty in Burma. Its use is restricted to the king, and to being placed over the images of Gautama. The king is supposed never to move except with the white umbrella held over him.

Aftab-giri of the Muhammadans of India and Persia is a round vertical parasol, carried at native courts to shade the sovereign. It can be used by other persons there only by the special grant of the sovereign.

Umbrellas of state in ancient Buddhist monuments of India are represented. In the Bharhut tope, there is represented a relic casket, over which a seven-headed Naga raises its head, and over it an umbrella of state.

State umbrellas of the Chinese are worn by those to whom they are granted; they are variously marked. China people of humbler rank can use paper umbrellas only.

Mark Antony was censured for having united the eagles of Rome with the state umbrellas of Cleopatra.

> 'Interque signa (turpe) militaris
> Sol aspicit cornopeum.'

Umbrellas are imported into India to the number of two or three millions annually, of value 19 to 23 lakhs of rupees, two-thirds of them from the United Kingdom, and their price on the average is 12 annas.—*Fergusson.* See Titles, p. 899.

UMBRELLA TREE, a name applied to the Acacia planifrons, which grows straight and then spreads its branches horizontally; a few of these are growing in the cantonment of Bellary; the name is also applied to the Pandanus odoratissimus, which throws down aerial roots.

UMBRINA RUSSELLII. *Cuv., Val.*

Ikan gulama, . . MALAY. | Qualar katchelee, . TAM.

Total length, six inches to one foot? Inhabits sea of Penang, Malayan Peninsula, Singapore, Vizagapatam, Indian and China seas. Its isinglass is considered of good quality.—*Russell; Cantor.*

UMDAT. ARAB. A pillar, a support, a prop; part of a Muhammadan title; Umdat-ud-Dowla, Umdat-ul-Umra.—*Catafago.*

UMMIADES, a dynasty of khalifas who ruled A.D. 661–2 to 744–5. Abd-ul-Malik, the fifth khalif, reigned 21 years at the close of the 7th and beginning of the 8th centuries. He was very penurious.—*Catafago.* See Khalif.

UMM-ul-KHAIR, a title of Rabia, native of Basra, a holy Muhammadan woman who passed her life at Jerusalem. She died A.D. 752-753, A.H. 135.

UMRA, plural of Amir, means nobles; it forms part of the titles of Muhammadan courts, as Amir-ul-Umra, noble of nobles.

UMRER, town in Nagpur district, Central Provinces, lat. 20° 18′ N., long. 79° 21′ E.; 28 miles south-east of Nagpur city. The Umrer dhotis consist of very fine cotton cloth with embroidered silk borders from an inch to a foot and a half wide. —*Imp. Gaz.*

UMRITSAR, an administrative division of the Panjab, comprising three districts of Gurdaspore, Amritsar, and Sialkote. The district takes its name from the chief town, Amritsar, situated nearly half-way between the rivers Beas and Ravi, in lat. 31° 40′ N., and long. 74° 45′ E., and contains 151,896 inhabitants. It is 36 miles E. of Lahore. It is a holy city of the Sikh religionists.

UNAO, chief town and administrative headquarters of the Unao district, Oudh, situated 9 miles north-east of Cawnpur, on the road to Lucknow, in lat. 26° 32′ 25″ N., and long. 80° 32′ E. Except where the country falls as it approaches the Ganges, a uniform dead level prevails; rich and fertile tracts, studded with groves, alternate with stretches of waste land and plains of barren usar, the whole intersected by small streams. There are several large marshes and sheets of water (jhils) in parganas Jhalotar, Ajgain, Parsandan, Unao, and the northern parts of Harha and Mauranwan, in which fish abound, and water-nut (singhara) is grown. According to local tradition, Mauranwan, Purwa, and the northern part of Harha were occupied by the Bhar, and the rest of the district by low-caste tribes of Lodh, Ahir, Thathera, etc. The most numerous races are Ahir, 86,087; Chamar, 85,230; Lodh, cultivators, 83,118; Pasi, 55,139; Murao, vegetable sellers, 35,683; Kori, weavers, 24,552; Nao, barbers, 22,430; Gararia, shepherds, 22,312; Teli, oilmen, 18,408; Kurmi, cultivators, 17,791; Dhobi, washermen, 13,670; Barhai, carpenters, 13,107; Mala, boatmen, 12,436; Kumbhar, potters, 10,944; and Kahar, palanquin-bearers, 10,763. The most important sections of the Muhammadans are Pathans (12,800) and Shaikhs (8121). Syuds number 2281.—*Imp. Gaz.*

UNCARIA GAMBIR. *Roxb.* Terra Japonica.

Tiau t'ang, . . . CHIN. | Unkoodoo, ... TEL.
Gambir, . . . MALAY.

One of a genus of plants belonging to the natural order Rubiaceæ, a native of Penang, Sumatra, Malacca, and Ceylon. The extract from the leaves is called gambier, and is manufactured in Siak, Malacca, and Bitang. A gambier plantation has much the appearance of brushwood of three years' growth, with small, smooth leaves of a dark-green colour. The leaves are collected three or four times a year, and boiled in a caldron, from which a strong decoction is poured into square boxes, which, when cool, hardens, and is cut into small cubes of about 1½ inches. As brought to the market, it resembles in appearance and consistency little square blocks of yellow mud, hence one of its names, Japan earth. The plants at Singapore are 6 feet asunder. The cropping of the leaves may commence when about eighteen months old, but the plant is at its full growth when two years old, and its leaves and young branches may then be cropped once in two months. The croppings are thrown into a large caldron of hot water, and boiled for six or seven hours, till all the extract be inspissated into a thick pasty fluid. This is now poured into shallow troughs a little more than an inch deep, and allowed to cool and dry, when it is cut up into little inch blocks, and is then ready for the market of Siam, Cochin China, China, and the Archipelago, where, along with betel-nut, in a leaf of the piper betel (Siri), it is largely chewed as a masticatory, as natives of India use the betel-nut of the Areca catechu. The

average size of the Singapore plantations are of thirty acres, and when in full bearing employ eight men. A plantation becomes exhausted and worn out in 15 years from its commencement.

As a preservative for timber, dissolve three parts of gambier in twelve of dammer oil over a slow fire. Then stir in one part of lime, sprinkling over the top, to prevent its coagulating and settling in a mass at the bottom. It must be well and quickly stirred. It should then be taken out of the caldron and ground down like paint on a muller till it is smooth, and afterwards returned to the pot and heated. A little oil should be added to make it tractable, and the composition can then be laid over the material with a common brush. As a protection against the teredo, black varnish or tar are substituted for dammer oil, omitting the grinding down, which would not answer with tar. Gambier is largely imported into Britain, and it is used in tanning. From 1846 to 1850, the average quantity entered was 1200 tons, priced at £13 to £14 the ton. It is duty free. Roxburgh (i. p. 517) describes also U. acida, U. cirrhiflora, U. ferruginea, U. lævigata, U. ovalifolia, U. pedicillata, U. pilosa, U. sessilifolia, U. sessilifructus, and U. sclerophylea.—*Thw. En. Pl. Zeyl.* p. 133; *Ainslie*; *O'Sh.* p. 398; *Crawfurd*; *Journ. Ind. Arch.*; *Poole.*

UNDAVILLI, on the south bank of the river Kistna, a mile from Bezwara, has a rock-cut temple, originally a Buddhist vihara, but now a Vaishnava shrine dedicated to Anantasena, a name of Narayana.

UNGIRA, father of Vrihaspati and Angirasa, was a Hindu philosopher, and author of a law treatise known by his name, and still extant.—*Ward*, iv. p. 25.

UNGULATA, an order of mammals, consisting of 1 sub-order, 3 tribes, 9 families. See Mammalia.

UNIONIDÆ, a family of molluscs, comprising the genera Ætherea, Anodon, Castalia, Iridina, Mulleria, Mycetopus, and Unio. Unio flavidens, *Benson*, and Unio marginalis, *Lam.*, are found at Bhandarda, a lake or jhil near Berhampur. They yield pearls.

UNJUN. HIND. Lamp-black, antimony; also the term for one of the sorceries of the Muhammadans in India, in which the diviner applies lamp-black to the palm of a child or adult, and bids him stare well at it, and the person then divines. The Urt'h-unjun is used to discover stolen property; the Bhoot-unjun, for ascertaining the state of the sick; the Dhanna-unjun, to discover hidden treasure; the Sarwa-unjun, for all purposes; and the Alope-unjun, applied to the eyes or forehead of a person, renders him, wherever he be, invisible to others, while they remain visible to him.

UNONA, a genus of plants belonging to the natural order Anonaceæ. Several species are known to occur in South-Eastern Asia. U. longiflora of Sylhet is an elegant tree, with smooth, pointed, and undulate leaves, which is much cultivated in some parts of India to form avenues and to afford shade. It is sometimes called deodara, which is properly the name of the celebrated Himalayan pine, Cedrus deodara; the U. odorata has large orange-yellow flowers. U. musaria has been so called from its bark being used for making musical instruments, as is indeed also that of another species. This is a rambling shrub, a native of Amboyna, etc.; the roots and bark are also used medicinally.—*Voigt*; *Eng. Cyc.*

UNSRI. In the Hindi of Upper Sutlej, Rubus flavus, the blackberry; in the Sutlej valley it is Rubus fruticosa, and R. flavus, yellow raspberry.

UPANAYANA, in the Hindu ritualistic ceremonials, is the investiture with the sacred thread, or Upaveta, which constitutes the second or spiritual birth. It is practised by the Brahman, the Kshatriya, and the Vaisya, who are from this called Dwija or twice born. With a Brahman, it should be carried out in the 8th and not later than the 10th year, for a Kshatriya in the 11th and not later than the 22d, and for a Vaisya in the 12th and not later than the 24th year. When five years old, the Hindu father fixes on an auspicious day, and entrusts his son to a teacher. The instructor writes the alphabet, or rather engraves it with an iron style, sometimes set in silver or gold, on a leaf of the palmyra tree, which is then coloured with turmeric. The leaf is placed on unhusked rice spread over the floor, and the teacher, whatever the sect or caste of the pupil be, invokes the god Vigneswara to smooth the difficulties in the way of the child's studies. Then, holding the boy's forefinger, he thrice traces with it the forms of the vowels in the rice, teaching the boy their sounds. The pedagogue is presented with a new cloth and some money, and dismissed, after which relatives and friends are entertained. On the seventh or ninth year, the Upanayanam is performed, on which occasion the family priest, Upa-d'hayya, SANSK., Upadhialu, TEL., causes the boy to offer a burnt-offering or Homa to the entire pantheon of gods, by pouring ghi (clarified butter) over the fire. He then invests the youth with the zandiyam, the zonar or sacred cord, letting it fall from over the left shoulder to the right side. He subsequently teaches the Gayatri to the boy, if he be of the Brahmanical order, as also the morning, noontide, and evening prayers, the due attention to which is considered sufficient to remove all sins committed during the day and night. The Gayatri or Gayatri-mantram of the Brahmanical or priestly order is never pronounced aloud; and it is exceedingly rare that any Brahman can be induced to divulge it. Its literal translation is, 'Om! earth, air, heaven, Om! Let us meditate on the supreme splendour of the divine Sun; may he illuminate our minds.' It is considered the most venerable text of the Vedas, and the common belief in and reverence for it is the bond of union amongst the entire Brahman order. With this ceremony the boy is considered to be born again, and he is of the Punar Janma or twice born. This is the spiritual birth of the Hindu, or his regeneration, for until this time the uninitiated youth, though of the Brahmanical class, is only, so far as his right to perform religious ceremonies is concerned, regarded in the light of a Sudra. If the youth who has now been initiated into the mysteries of the Brahmanical order, be set apart for the sacerdotal office of the priesthood, he is further marked on the muscular part of both arms by being branded with sanku or chank and chikram or disc of Vishnu. This is called the Chakrankitam. From this time, however, he is ranked as a Brahmachari, or of the order of bachelors, for he has now entered on his religious life, the whole of the days of a spiritual

Brahman being apportioned into four religious stages, viz. that of the Brahmacharyam, or bachelorhood; Grahastasramam, or the married state; Vanaprastam, the living in solitude with his family; and Sanyasam, or the abandonment of all worldly matters. A bachelor's dress differs from that of a married man in so far as he does not wear the dhoti, but only a wrapper round the lower part of the body; he is prohibited from eating betel, and continence is enjoined. Among other Hindu castes, the Brahmachari ceremony is performed at any time prior to the celebration of marriage, but their Gayatri is from the Puranas, not the Vedas.—*Wilson.*

UPANGA, holy books of the Hindus: Purana or history, comprising the 18 Puranas; Nyaya, logic and the principles of knowledge; Mimansa, religious principles and duties; Dharma Shastra, law, human and divine. See Vidaya.

UPANISHAD, a class of sacred books belonging to the Hindus, containing doctrines of the Vedas explained and enlarged according to the Vedanta. They are the best books after that school. Their theology is monotheistic, a pure theism, and Brahm, in the neuter gender, is used for the deity; the dogma of one Supreme Being, detached from matter, maya or sacred. The Upanishad, therefore, may be described as treatises on the unity of God and the identity of spirit. Some of the shortest were translated into English by Ram Mohun Roy, Dr. Carey, and Sir W. Jones. They were also rendered into Persian by order of Dara Shekoh, the son of Shah Jahan, and were thence rendered into Latin by Anquetil du Perron, a summary of whose works in the French has been published by M. Lanjuinais. In 1882, Mr. A. E. Gough, Principal of the Calcutta Madrassa, has treated on their philosophy and ancient Indian metaphysics, and the translations of five of them are given in Max Muller's Sacred Books of the East. The whole number of Upanishads known at present is 138, of which only 11 have been published. According to the theory laid down in the Mahavakya Ratnavali, there are 1180 Upanishad, equal to the number of Vedaic schools, one Upanishad belonging to each school. This theory, however, is fanciful. According to the received definition, the Upanishad are such parts of the Vedas as embody their metaphysical and theological views, which may be compressed into the formula that the finite soul is essentially the same with the infinite spirit or Brahma; and though the various Upanishads widely differ from each other, all maintain this identity of the finite and infinite spirit. Dr. Weber arranges the Upanishad into—(1) those which belong to the three first Vedas, as forming the Vedanta system; (2) those comprising all the Atharva Upanishad, and referring to the Vedanta system in its entire development; (3) the Upanishad in which the meditation has become crystallized, and is limited to the mystical word Aum; (4) those treating on the order of the Sanyasi; and (5) the last division, which includes the sectarian Upanishad, in which the Atma is worshipped as an independent deity.

The Talavakara Upanishad has the following fine thoughts concerning the nature of God:—

'Canst thou conceive the vast Eternal Mind,
To rock and cave and Libyan waste confined?
Is there a place which God would call his own
Before a virtuous mind, his spirit's noblest throne?
Why seek we further? lo! above, around,
Where'er thou wanderest, there may God be found;
And prayer from every land is by his blessing crowned.'

—*Thomas' Prinsep's Antiquities; Taylor; Hind. Th.* ii. p. 13; *Darwinism in Morals*, p. 200.

UPAPATAKA. SANSK. A crime in Hinduism, such as killing a cow, selling a daughter.

UPA-PURANA are 18 in number, viz. Sanatkumara, Nara-sinha, Naradiya or Vriha-Naradiya, Siva, Dur-vasasa, Kapila, Manava, Ausanasa, Varuna, Kalika, Samba, Nandi, Saura, Parasara, Aditya, Maheswara, Bhagavata, and Vasishtha. They are Hindu religious books.—*Dowson.*

UPARAVADA or Upera-Wandlu. TEL. Dravidian people who, along with the Wadra-wandlu or Waddar race, are employed in digging tanks, salt-making, and road-making. Their implements are the guddapara or crowbar, the mamotee, phaora or hoe; women make baskets and tattoo figures on the arms of Hindu women.

UPARICHARA, a Vasu or demigod king of Chedi. He had five sons by his wife, and by Adriki, an Apsaras, condemned to live on earth in the form of a fish. He had a son named Matsya, and a daughter Satyavati, who was the mother of Vyasa.—*Dowson.*

UPAS, in Japanese, poison or venom, is the term applied to the sap of some plants of the Malay and Philippine Islands yielding poisonous juices, which, by concentration, produce a poison of considerable activity, and is sometimes employed by the ruder natives to render their weapons deadly. The most potent of these plants in Java are the anchar, the Antiaris toxicaria, a large forest tree, and the chetek, Strychnos tieute, a climbing shrub. In all these cases, the poison, even when fresh, is far less active than that of the cobra snake, for the most powerful will take an hour to kill a dog, which the venom of the hooded snake would certainly accomplish in half the time. To effect a fatal purpose, too, it is necessary that the poisoned weapon should be left in the wound, and not withdrawn, so that the probability is that few human beings have ever lost their lives by means of these poisons.—*Crawfurd; O'Shaughnessy.*

UPASAMPADA, the rite of ordination into the Buddhist priesthood.

UPAS ANTIAR, the Upas tree or Anchar.

Antiaris toxicaria, *Lesch.* | Ipo toxicaria, *Pers.*

A native of Java, where it grows in the forests, often over a hundred feet in height. It was first described by Mr. Foersch, a surgeon of the Dutch E. I. Co., in vol. iv. of Pennant's Outlines of the Globe, and was then reprinted in the London Magazine for September 1785. Dr. Darwin celebrated it in poetry, where he says,—

'Fierce in dread silence, on the blasted heath
Fell upas sits, the hydra tree of death.'

Dr. O'Shaughnessy mentions that the tree grows in Java in a valley filled with carbonic acid, into which it is therefore highly dangerous to descend; and he supposes that this probably originated the stories as to the deadly influence of the tree. The tree itself is often over 100 feet in height; its bark pale, smooth; its leaves oval, coriaceous, hairy. The poison is prepared by mixing the gummy resin (into which the bitter viscous juice concretes) with the seed of the Capsicum frutescens

and various other aromatics. This poison at first acts as a purgative emetic, then as a narcotic, causing death by violent fits of tetanic convulsions. The arrows are small and slight, and are discharged with accuracy from the sumpitan or blow-pipe by the mouth.—*Voigt; O'Sh.; Crawfurd; Eng. Cyc.; Wathen's Voyage*, p. 165.

UPA VEDA, religious books of the Hindus. There are four,—the Ayush or Ayur, medicine; Gandharva, music, dancing; the Dhanush or Dhanur, warfare; and the Sthapatya, mechanics, architecture. The third Upa Veda was composed by Viswamitra, and treats of the fabrication and use of arms and implements handled in war by the Kshatriya tribe. These are sciences which have no connection whatever with the Sruti or revealed Veda.—*Thomas' Prinsep.*

UPA-VITA. SANSK. The thread or cord worn by the three classes of Hindus over the left shoulder and under the right arm, and worn also by the five Kansala or artisan races. It is called Zandiam in Telugu and Punal in Tamil. That of the Brahman should be of cotton, the Kshatriya of flax, and the Vaisya of wool.

UPAZEN. BURM. The regular monks of a Burmese monastery, who are ruled by the Phoungye or superior.—*Yule*, p. 182. See Monks.

UPEI. MALAY. The outer envelope of the stem of the pinang or Areca catechu palm, below the bunches of fruit. It is used in the Archipelago for making sifters (timba), for packing goods, making torches, etc.

UPPER GODAVERY, formerly applied to a separate British district in the Madras Presidency, bounded on the south and west by the Godavery and Pranhita rivers. Population, in 1872, 52,120; area, 1085 square miles. Cromlechs, kistvaens, and cairns scattered in forests and on hillsides, excite the curiosity of the inquirer. The most numerous of the aboriginal tribes are the Gonds (15,876); the remainder consist of Bhils, Bhilals, etc. The Gonds are subdivided into Gote and Koi or Koitor. Though identical in customs and in language, these do not eat together nor intermarry, and the Koi claim a superiority over the Gote. Among the Hindus, Brahmans numbered 705; the mass consist of Dher or Mhar, Dhimar, Kurmi, and other cultivating or inferior castes; native Christians, 236.—*Imp. Gaz.*

UPPER SIND, a frontier district, consists of a narrow strip of level plain, half of which is covered with jungle and subject to annual inundation. The Begari canal flows along the south of the district to Khera Garhi in the extreme west; total length, 85 miles; width at mouth, 57 feet. Five canals—the Nurwa, 40 miles long; Sonwa, 19 miles; Mirzawa, 9½ miles; and Budwa, 4 miles—branch from the Begari. The Desert canal, formerly known as the Maksudwa, runs 35 miles into the desert west of Kashmor. The border tribes are the Mazari, Burdi, Khosa, Jamali, Jatai, Dumki, Jakrani, and others. The predatory Mazari inhabit the country on the right bank of the Indus, between Mithankot and Burdika. The Burdi reside chiefly in the district called after them Burdika, which lies on the western bank of the Indus, between the Mazari district on the north and the Sind canal on the south. The habits of this tribe were formerly wholly predatory, and up to 1847 the tribe made frequent marauding inroads on their neighbours in Kachhi and in the hills, as well as in Sind.

UPPU SANAGA. TEL. Cressa Indica, *Retz*, so called from frequenting salt lands near the sea, where it has much the look of young chenna, the Cicer arietinum or Bengal gram.

UPPUTERU, a river flowing out of the Colair lake. There are several streams running into it, the principal of which is the Funmilair; there is but one river flowing out of it, the Upputeru or Salt River. It is a tidal river, and makes its way into the sea some miles south of Nursapore. The course of this river from the Colair to the sea, forms the boundary between the Krishna and the Godavery districts. This river being the only outlet to the Colair, there are great facilities for irrigation. For by throwing a bund across the river, the waters of the lake can find no exit, and consequently can flood an immense tract of country. This, however, cannot be done every year, as under certain circumstances it might do more harm than good. But when the ordinary cultivation has failed, this expedient may be resorted to with very great advantage both to the cultivators and to Government.

UPREE, a Mahratta revenue term to designate a tenant-at-will; a non-freeman of a Mahratta village, a sojourner, a temporary resident who has not earned a right of settlement.

UPUPA EPOPS. *Linn.* Upupa Indica, *Hodgs.*

Hoopoe, ... ENG.	Hudhud, ... HIND.
Epops, . . . GR., LAT.	Kat-kuto, . . . SIND.

The hoopoe of Europe, Asia, and Africa is a common winter visitant in Lower Bengal, but is generally replaced by a nearly affined race in Upper Hindustan and South India. This bird was often alluded to by Greek and Latin authors, and Ovid makes Tereus be transformed into it. It belongs to the Upupidæ, a family of insessorial or perching birds. Its long crest of parallel rows of white, yellowish brown, and black feathers, is frequently erected, and when seen flitting in a dense forest, it looks a very handsome bird. It is easily domesticated, and flits about a room. Its long curved bill enables it to search for worms in the ground. It builds in holes in old walls. It is to all appearance a bird of fluttering and feeble flight, but it has repeatedly been observed, during its seasons of migration, at altitudes considerably above the limits of vegetation. 'On the western side of the Ladakh pass, about 16,500 feet, I saw a hoopoe,' writes Major Cunningham; and at Momay (14,000 to 15,000 feet elevation), under the lofty Donkia pass in Northern Sikkim, in the month of September, Dr. J. D. Hooker observed birds flock to the grass about Momay; larks, finches, warblers, abundance of sparrows (feeding on the yak droppings), with occasionally the hoopoe; and waders, cormorants, and wild ducks were sometimes seen in the streams, but most of them were migrating south.—*Hooker, Him. Jour.; Cunningham's Ladakh.*

UPUPA NIGRIPENNIS. *Gould.*

U. minor, *Sykes, Jerdon.*	U. Senegalensis, *Blyth.*
Indian hoopoe, . ENG.	Kukudeu guwa, . TEL.
Hudhud, ... HIND.	Kondah pitta, . . . ,,

The Indian hoopoe is found throughout India; its builds in old walls, and eats insects.

UQEEQA. ARAB. A sacrificial rite amongst the Arab Muhammadans, consisting of an offering to God on the chutthee or chillah, the fortieth day

after delivery, of one, if a girl, or two he-goats, if a boy.—*Herk.*

UR, also Pura. HIND. A town, as Bangalore, Narsingapur.

UR of the Chaldees is the modern Mugheir; it lies between the eastern confluents of the Chaboras and Tigris. It was founded under the second ruling dynasty of Berosus, to which is assigned the date B.C. 2286. The great structures of Ur rose in terraces, the surfaces of the walls were decorated with blue enamel, polished agates, alabaster, pieces of marble, mosaics, copper nails, and gold plates. Rafters of palm-wood supported the roof, though there were also early attempts at arched vaults. The tombs contained sarcophagi, consisting of two earthenware vessels fitted together, and at the side of the dead are found polished flint utensils, bronze implements, gold ear-rings, and brass armlets. The cylindrical signet-ring of king Urech has been found, and has proved the existence then of a written character. Erech, the modern Warka, Nipur or Calneh, the modern Niffer, and Babel, now Hillah, and Borsippah were the oldest towns known to the writer of Genesis.—*Peschel*, p. 498.

URANIA SPECIOSIA. *Tr.* Traveller's tree. Ravenala of Madagascar. This elegant tree, a native of Madagascar, since 1802 has been cultivated in India for ornament. Its short, solid trunk resembles that of the palm tribe, but its leaves those of the plantain, and when growing it forms a perfect screen. It bears a small fruit like the drupe of a plantain, which is of a bluish colour. The juice of this plant has the property of rendering water or milk, either hot or cold, mucilaginous, without altering the taste, colour, or smell of the liquid in its former state. Butter-milk and water is often thickened with the juice of this plant. It is propagated by seeds and suckers. The plant attracts attention from the fan-like arrangement of its ample leaves, the sheathing bases of which contain, even during the most arid season, pure fresh water. Mr. Ellis says, 'One of my bearers struck a spear four or five inches deep into the thick firm end of the stalk of the leaf, about six inches above its junction with the trunk, and on drawing it back, water gushed out. It was cool, clear, and perfectly sweet.'—*Ellis, Madagascar; Roxburgh; Collingwood; Riddell; Mason.*

URAON is alike the name and the language of a race. Theirs is an uncultivated idiom, and contains so many Dravidian roots of primary importance, that it is considered by Dr. Caldwell as having originally been a member of the Dravidian family. The Uraon vocabulary of Colonel Ouseley (Hodgson's series) has so much resemblance to the Malé that it may safely be set down as a dialect of the same language. It frequently agrees with the Malé where it differs from the co-dialects with which it is now in contact in Chutia Nagpur. This may be considered as confirming the tradition of the Uraon that their original country was Rotas and parts of Rewah, or the hills along the northern bank of the Sone (to the southward of Benares). According to the tradition, they were driven across the Sone by the intrusion of Gangetic Hindus into their native land, and ultimately settled in Chutia Nagpur, the country of the Kol tribe of Munda or Ho. At a later period, Hindus pushed into this territory, reduced the more civilised Uraon to slavery, drove the wilder Kol into revolt, and eventually forced them to migrate to the southward and eastward into the land of the Bhuiyan. The more northerly of the eastern emigrants passed out into the low country, and, mixing with the Bhumij and Bhuiyan natives, formed the class of Tamaria. The more southerly moved into Singbhum and Kolehan, living at peace with the Bhuiyan pre-occupants until the intrusion of Hindus from Marwar, who first leagued with the Bhuiyan against the Kol and then with the Kol against the Bhuiyan, and finally appropriated Singbhum, leaving Kolehan or Hodesam to the Kol or Ho, as this southern tribe call themselves. Remnants of the Kol are still found to the northward nearer Chutia Nagpur, and they appear to be also spread to the northward towards Rajmahal. The Malé are now confined to the N.E. extremity of the Vindhya, where the Ganges washes and bends round the chain, and are separated from the south Dravidian nations by the Kol. The explanation is probably to be found in the circumstance of the Uraon and Malé originally forming an uninterrupted extension of the Gond tribes and dialects that extended from the Godavery to the north extremity of the Vindhya.

URARIA PICTA. *Desv.*

Doodia picta, *Roxb.* | Saukr-juta, . . . BENG.

A shrubby plant of Coromandel and Bengal, with small red flowers.

UR-BHUI, TEL., also called Ur-bhui-wanlu, are mercenary soldiers who serve native sovereigns. They are never found in the ranks of the British army. There are a few of them in every large town in the Peninsula of India. Their name is of Telugu origin, and means town-bhui.

URCEOLA ELASTICA. *Roxb.*

Vahea gummifera, *Roxb.* | Tabernæmontana elast. *Sp.*

The India rubber tree, or caoutchouc vine. In Sumatra and Pulo Penang, a large woody climber, yields caoutchouc of the finest quality in great abundance. Dr. Hooker mentions that a plant which grows in the forests east of Chittagong, the milk of which flows in a continuous stream resembling caoutchouc, is probably the Urceola elastica, which yields India rubber. The milky juice of the plant oozes out through wounds made in the bark; on exposure an elastic coagulum separates from a watery liquid; the coagulum is caoutchouc or India rubber.—*Roxb.*

URD'HA-BAHU. SANSK. From Urdha, above, and Bahu, the arm. A sect of ascetic Hindus, solitary mendicants, who extend one or both arms above their heads till they remain of themselves thus elevated. In some of the creeds of the Hindus, personal privation and torture is of great efficacy, and the Urd'ha-bahu are individuals who, urged by credulity or knavery, have adopted this mode of distorting their limbs. They also close the fist until the nails grow through the hand. They subsist on alms; many go naked, but some wear a wrapper stained with ochre. Under British rule all such classes have disappeared.—*Wilson.*

URDU. HIND., TART. Literally a camp. The term given to the new tongue generally styled Hindustani, which originated in the Moghul camp at Dehli. A basis of Sanskrit and Hindi, with a copious influx of Arabic, Persian, and Turkish words, but following the grammatical inflexion of the Hindi, with occasional slight modifications. Urdu poets are innumerable; to write Urdu

poetry is the fashionable accomplishment of every educated Muhammadan in India. Urdu is spoken by about 82,497,168. Urdu poetry follows the prosody of the Arabic and Persian. A verse is called a bait or house; the hemistich or half verse, a misra or door. A rubai is a poem in which the stanzas consist of four misra or hemistichs; a mukhammas, one of five hemistichs; and the musaddas, of six. Qafiya means to follow, and is used to designate rhyme. Dobaiti, or two-versed, is a short epigrammatic poem. Ghazl corresponds to the sonnet or ballad of the English language. Masnawi is the heroic poem. It has all its bait or verses composed of the same metre. Diwan is a collection of poems. Bahr is metre; Bahr-i-Mutagarib, pleasant metre; Bahr-i-Saria, rapid measure; Bahr-i-Khafif, short measure; Bahr-i-Kamil, perfect measure.

URENA LOBATA. *Roxb.*

Kangya, Kanguya, BENG.	Uren, ... MALEAL.
Ban-ochra, BENG., HIND.	Piliya, ... TEL.
Wet-khyæ-pai-nai, BURM.	Talia mankena, . ,,
Kat-sai-nai, . . . ,,	

This malvaceous plant, as also U. sinuata, is common in most parts of India, and along the coasts of Amherst and Tenasserim. The bark of U. lobata yields a strong and tolerably fine substitute for flax. It is an annual, flowering in December. It is the pest of Rangoon and its neighbourhood, springing up spontaneously wherever the jungle is cleared, and rapidly forming a dense mass of luxuriant vegetation. The fibre is manufactured by simple maceration, and afterwards beating the stalks. Very good gunny has been made from it, and it is believed that the fibre might, if treated with due care and skill, prove valuable. Any quantity of the plant may be had for the mere trouble of gathering it.—*Royle; Roxb.; Mason; M'Clelland.*

URGUJJA. HIND. A yellowish-coloured perfumed powder, made of several scented ingredients, sandal-wood, wood-aloes, rose-water, attar of roses, civet-cat perfume, and oil of jasmine.—*Herklots.*

URIAL or Oorial, the Panjab wild sheep, Ovis cycloceros, *Hutton.* The burhel or blue wild sheep is O. nahura.

URI KULURU KRADU. TAM. Sir J. E. Tennent (ii. p. 468) gives this as the Tamil name of a musical mollusc of Ceylon, and which he surmises to be Littorina lævis, or Cerithium palustre. The Tamil for crying shell, however, is Kuchilpodu-kira-kilinjal.

URIYA, a language which prevails in the N. part of the Ganjam district, as far south as Itchapore. In the southern division the Telugu prevails.

URMUK, a cloth of camel's hair, but occasionally made of shawl-wool. Also a product of the Kashmir looms resembling strong nankin.

UROOS. ARAB. Oblations, offerings to a saint, the anniversary of whose death is called his Uroos, as Kadir Wali ka Uroos, the festival day of Kadir, the saint.

URORA, a Muhammadan tribe on either side of the Indus, south of Kalabagh, and around Multan.

UROSTIGMA, a genus of plants, formed from the genus Ficus.

Urostigma Arnottianum, *Mig.*

Kappootoo-bo-gass, ... SINGH.

Grows in the hot, drier parts of Ceylon. It is not Ficus lucida.—*Thw.*

Urostigma Bengalense, *Mig.*

Ficus Bengalensis, *Linn.* | F. Indica, *Linn.*

Maha-nooga-gass, ... SINGH.

Grows all over India, and in the hotter parts of Ceylon, probably not indigenous.—*Thw.*

Urostigma Ceylonense, *Mig.*

Ficus infectoria, *Willd.* | U. tjakela, *Mig.*
U. ægeirophyllum, *Mig.* | Kirri-palla-gass, . SINGH.

Common in Ceylon up to an elevation of 2000 feet. The Singhalese sometimes use the bark of the tree instead of the areca nut, to chew with their betel leaf.—*Thw.*

Urostigma Mysorense, *Mig.*

Ficus Mysorensis, *Roth.* | Ficus citrifolia, *Willd.*

Boonooga-gass, ... SINGH.

A tree of the Peninsula of India, not uncommon in Ceylon up to an elevation of 2000 feet.—*Thw.*

Urostigma religiosum, *Mig.*

Ficus religiosa, *Linn.*

Ashwertha, . . . BENG.	Bo, Bo-gaha, . . SINGH.
Pipal, ... HIND.	Bo-gass, ... ,,
Arealu, . . . MALEAL.	Arasam maram, . . TAM.
Pippula, ... SANSK.	Raya-manu, Raghi, . TEL.

The holy fig tree is to be seen in all parts of India. It is much admired by Europeans for its elegant form and the constant movement of its leaves. It is the Bo Tree of the Singhalese Buddhists, and is to be met with in that island wherever there is or has been a Buddhist temple; but the most famous Bo Tree is at the temple at Anaradapura. It was grown from a cutting sent from Hindustan, and in A.D. 1900 it will be 2200 years old. It is held in great estimation by Singhalese Buddhists. The frequency of F. religiosa and F. Indica depends very much on the proportion of Hindus among the population. In some parts, where the latter is almost entirely Muhammadan, these trees are very rare, even allowing for differences of climate.—*Roxb.; Thw.*

Urostigma retusum, *Mig.*

U. nitidum, *Mig.*	F. nitida, *Thunb.*
U. ovoideum, *Mig.*	F. Benjaminea, *Roxb.*
U. pisiferum, *Mig.*	F. pallida, *Wall.*
Ficus retusa, *Linn.*	

A frequent tree in India, and common in the Central Province of Ceylon up to an elevation of 5000 feet.—*Thw.*

Urostigma tsiele, *Mig.*

Ficus tsiela, *Roxb.* | F. amplissima, *Linn.*

Datira, ... MAHR. | Ichi maram, . . . TAM.
Eichie maram, . . TAM.

A tree of India, common on the Bombay side, in ravines of the ghats, but not on open forest land. There is a noble specimen of this tree in the Royal Botanic Garden, Ceylon, whose branches spread over an area of ground 120 yards in diameter.—*Roxb.; Thw.*

Urostigma tomentosum, *Mig.* Ficus tomentosa, *Roxb.* A tree of India and Ceylon.—*Thw.*

Urostigma Vogelii, *Mig.* The African rubber tree of W. Africa.

Urostigma Wightianum, *Mig.* U. perseæfolium, *Mig.* Common in the Central Province, Ceylon, up to an elevation of 5000 feet.—*Thw.*

URSIDÆ, the bears, a family of carnivorous mammalia. The following are synonyms:—

Dub, . . ARAB., PERS.	Riksha, . . . SANSK.
Arktos, ... GR.	Karadi, ... TAM.
Rich, ... HIND.	Gudelgu, ... TEL.
Ursus, ... LAT.	

Four Indian species are known, viz. Ursus

Isabellinus of Horsfield; U. labiatus of Blainville; U. Malayensis of Raffles; and U. Tibetanus of Cuvier. U. Isabellinus is, according to Gray, the U. Syriacus of Hemprich and Ehrenberg, and is that known to Himalayan sportsmen as the brown, red, yellow, white, grey, silver or snow bear or Tibetan snow bear, and the harput of Kashmir, for it inhabits Tibet and the snowy regions of the Himalaya, and high Central Asia generally.

U. labiatus of Blainville, the black bear, is found all over India, Ceylon, and Assam, and is the Bhalu or Rich. It has received several scientific synonyms, attaching it to the genera Bradypus and Melurus, and its names in English, five-fingered sloth, sloth bear, and ursine sloth, have varied correspondingly. It is readily domesticated. When wild, it lives on roots and honey.

U. Malayanus occurs in Arakan, Malay Peninsula, Sumatra, Java, Borneo, and in Indo-Chinese countries generally.

U. Tibetanus, the black bear of Himalayan sportsmen, inhabits the forest region of the Himalaya, and is very rare in Tibet, though met with in its eastern forests. It seems identical with U. Isabellinus.—*Blyth, Cat.*

Ailurus fulgens, *F. Cuv., Blyth., Hard.*

A. ochraceus, *Hodgs.*

Wahdonka, . . . BHOT.	Negalya-ponya, . NEPAL.
Sunnam, . . . LEPCHA.	Wah, ... ,,
Suknam, . . . ,,	

Red cat bear, S.E. Himalaya, Nepal, Sikkim.

URSUS ISABELLINUS. *Horsf., Blyth.*

U. Syriacus, *Hempr.*

Snow, brown, red, yellow, grey, or silver bear, ENG.	Bhalu, ... HIND.
	Harput, . . . KASH.
Barf-ka-ritch, . HIND.	Drin-mor, . . . LADAKH.

The brown bear inhabits the Himalaya mountains, but Dr. Adams says its distribution is not so general as that of the black species, Helarctos Tibetanus, which is spread over the whole extent of the lower ranges of the Indian Himalaya, whereas the brown bear is confined to districts, and prefers high and rugged mountains near the confines of perpetual snow; and nowhere is its fancy better gratified than among the noble chains which surround Kashmir, especially the secluded glens, such as the Wurdwun valley and its offshoots. Bears were at one time very abundant there, but every year shows marked diminution in their numbers, so that before long we may expect to hear of the almost complete extermination of the species in the Kashmir ranges. Dr. Adams says that if not a variety, it is certainly very closely allied to that of Europe, Northern Asia, and arctic America. In Asia, the bear of Siberia and the Altai, U. arctos, is called the brown bear; but this species is said to frequent the Himalayas only. Dr. Horsfield named it U. Isabellinus, from a single skin brought from Nepal, but in colour two specimens are seldom exactly alike.—*Drs. Adams, Jerdon.*

URSUS LABIATUS. *Blain., Blyth, Ell.*

Bradypus ursinus, *Shaw.*	Melursus lybicus, *Meyer.*
Kaddi, Karaddi, . CAN.	Bhalu, ... HIND.
Rich, ... DUKH.	Banna, ... KOL.
Sloth bear, . . . ENG.	Aswail, . . . MAHR.
Indian black bear, ,,	Riksha, . . . SANSK.
Horse-shoe bear, . ,,	Karadi, ... TAM.
Yerid, ... GOND.	Elugu, ... TEL.

This bear has a white V-shape mark on its breast; it inhabits Ceylon and all British India and Kashmir. It lives on fruits, seeds, honey, and ants. It is easily tamed, taught to show antics, and is led about to be exhibited.—*Jerdon.*

URSUS MALAYANUS, U. euryspilus, Malayan bear, is perfectly identical in Borneo, Java, Assam, Arakan, Tenasserim, etc.—*Wallace.*

URSUS SIWALENSIS, a fossil bear, discovered by Sir P. T. Cautley in the Siwalik Hills.

URSUS TIBETANUS. *F. Cuv.*

U. torquatus, *Schinz.* U. ferox, *Robinson.*	Helarctos Tibetanus, *Adams.*
Bhalu, Bhalak, . . BENG.	Himalayan black bear.
Thom, ... BHOT.	Sona, ... LEPCHA.

The black bear's favourite haunts are in the woods and jungles of the lesser ranges of the Himalayas, where it lies all day, to issue forth at nightfall and feed in fields and gardens. The black bear is not uncommon along the foot of the barrier-chains of Kashmir, and during the fruit season may be found in the valley, where its depredations among the apple, walnut, and mulberry trees are frequent, and whole crops of Indian corn are sometimes completely destroyed by these unwelcome intruders. Although said to attack sheep at times, this species is eminently a vegetable feeder, and so expert in climbing trees, that it may frequently be seen on the topmost branches, standing erect, and seizing the branches with its fore paws.—*Adams.*

URTICACEÆ, the nettle tribe of plants, are trees, shrubs, or herbs; about 300 species of them are known to occur in the East Indies, in the following 16 genera, viz.:—

59 Urtica.	11 Boehmeria.	1 Antiaris.
1 Parietaria.	1 Cannabis.	1 Broussonetia.
2 Conocephalus.	13 Morus.	1 Dorstenia.
167 Ficus.	1 Lepurandra.	1 Epicarpurus.
14 Artocarpus.	2 Batis.	
2 Trophis.	21 Procris.	

Many of these plants are lactescent. The genera Urtica, Boehmeria, and Cannabis all furnish useful fibres; the genus Morus, the edible mulberry, and its leaves, are the favourite fruit of species of silk-worm; the bark of the Broussonetia is manufactured into a strong paper material; the genera Ficus and Artocarpus, the fig trees and jack trees, yield edible fruits. The cow tree belongs to this natural order, and apparently to the genus Bresimum. When wounded, a milky nutritious juice is discharged. It is described by Humboldt as being peculiar to the Cordilleras of the coast of Caracas, particularly from Barbula to the lake of Maracaybo, near the village of San Mateo, and in the vicinity of Caucagua, three days' journey east of Caracas. In these places it bears the name of Palo do Vaco or Arbol de Leche, and forms a fine tree resembling the star apple of the West Indies. Species of Urtica and Girardinia abound on the Neilgherries and other localities, and yield a long and silky fibre like the true rhea or China grass. The two plants of the Urticaceæ that grow on the Neilgherries are the Urtica heterophylla or common Neilgherry nettle, and the Girardinia Leschenaultiana of Dr. Wight's Icones, a superior kind of nettle, yielding a very fine strong fibre. The latter plant grows in abundance on the Animallay range, and in great quantities at the foot of the Cunur Ghat, at a level of only 1000 feet above the sea. In the Sikkim Himalaya the fibres of some of the various nettles are twisted for bowstrings, others as thread for sewing and

weaving; while many nettles are eaten raw and in soups, especially the numerous little succulent species. When preparing for the Great Exhibition of 1859, Dr. James Taylor named several plants in Bengal adapted for the manufacture of textile fabrics. A species of Urtica, of whose fibres the much admired grass cloth of China is made, is cultivated in Rungpur; and either it, or an allied species, the rhea, is grown in Assam and Cachar. It is now known as the Boehmeria nivea, *Gaudichaud*, and seems to be the U. nivea, *Linn.*, and U. tenacissima, *Roxb.*, and yields the Rami of Assam and Rhea of commerce. Endeavours have frequently been made to utilize the rhea plant of India for the production of textile fabrics, but without general success. The Indian Government have, within the past fourteen years, twice offered a price of £5000 for a machine to effect its profitable decortication. This prize has been twice competed for, and twice withdrawn in consequence of all the mechanical means submitted for trial having failed to meet the requirements of the Government. A machine has been constructed which effectually separates the fibre from the woody stem of the green rhea, and at the same time cleanses it from all extraneous adherent matter, producing it in good condition for the market, and this without any previous or subsequent treatment. This machine, which is the invention of Mr. H. C. Smith, consists of an iron framing about 3 feet high, 2 feet wide, and 3 feet deep from front to back, carrying a revolving drum about 18 inches in diameter and 12 inches wide. The drum is fitted with a series of beaters, which pass near to the edge of a small feeding-table about 12 inches wide, the drum being covered in with an iron hood. From beneath the feeding-table a thin sheet of water is made to play in a constant stream against the drum at a certain pressure and angle, and this constitutes the whole of the apparatus. The fibrous plants are fed in by hand on the feeding-table, and are simply held up to the beaters by a cushion or backing of water, by which means the whole of the extraneous matter is removed, and the fibre produced in a remarkably short time, and in excellent condition. In the tests, 115 stems of the French rhea were treated by the operator, and the fibre produced clean and free from all adherent particles in three and three-quarter minutes. Besides the foregoing, several varieties of fibrous plants were put through the machine, including the Fourcroya gigantea, an Indian aloe, the Sanseviera Zeylanica, or bow-string hemp as it is called by the natives, the yucca, and the Phormium tenax, or New Zealand flax. All these were successfully treated. There were shown some samples of fibre of the Fourcroya gigantea, and Moorva or Sanseviera Zeylanica. Rhea fibre has brought in England £80 the ton, and never sold under £45. The China grass-cloth, a beautiful fabric made in the Canton Province, is largely exported to Europe and America. The Boehmeria (Urtica) nivea plant, which is supposed to produce this, is abundantly grown in Kiang-si and other provinces. Fabrics of various degrees of fineness are made from this fibre, but none are so fine as that made about Canton; it is also spun into a very strong and durable thread. There are said to be two very distinct varieties of this plant common in Che-kiang,—one cultivated, the other wild. The cultivated variety has larger leaves than the other; on the upper side, they are of lighter green, and on the under they are much more downy. The stems also are lighter in colour, and the whole plant has a silky feel about it which the wild one wants. The wild variety grows plentifully on sloping banks, on city walls, and other old and ruinous buildings. It is not prized by the natives, who say its fibre is not so fine, and more broken and confused in its structure, than the other kind. The cultivated kind yields three crops a year. The best fibre is obtained from young shoots. Urtica argentea is a nettle of the Society Islands, the fibres of which are converted into cord. Urtica dioica, *Roxb.*, Sinma, CHIN. The plants are thrown into the streams to poison fishes.—*Smith; Roxb.; Hooker, H. J.* i. p. 293; *Jur. Rep. Exh.*, 1851; *Royle, Fib. Plants; Fortune; Williams' Middle Kingdom; Hogg, Veget. Kingd.*

URTICA CRENULATA. *Roxb.*

Chor-patta, . . . BENG. | Daoun-shaitan, . TIMOR?
Mialim-ma, . . SIKKIM. |

A gigantic stinging nettle, a native of the hills and valleys on the east of Bengal, at Luckipur, Pundua Hills, and Assam. Dr. Hooker mentions that where the ground is swampy, this gigantic nettle abounds. It has an erect shrubby stem, with oblong acute leaves, having the margins crenulate or slightly dentate, both sides alike, the bark armed with acute burning hairs. The sting produces great pain, extending to the armpit; abates after two or three days, but does not disappear entirely for nine days. Major Hannay says of this and another gigantic stinging nettle, that they afford a quantity of fine white fibre, but apparently of no great strength, and, by report, not very lasting. Some of the hill tribes use the fibre for fabricating coarse cloths. According to Dr. O'Shaughnessy, it stings so terribly that it has sometimes occasioned very formidable symptoms. Another Urtica, the Daoun-shaitan, or demon nettle of Timor, is still more dangerous in its effects.—*O'Sh.; Royle, Fib. Pl.* p. 66; *Hooker, H. J.* ii. p. 339; *Roxb.* iii. p. 591.

URTICA HETEROPHYLLA. *Roxb.*

Urtica palmata, *Forsk.*	Girardinia Leschenaultiana, *Wall.*
Huru, ... ASSAM.	Alu, ... HIND.
An, Jan, Kal, . of BEAS.	Bichua (scorpion), . ,,
Henpa, Serpa, . . BHOT.	Keri . . . of JHELUM.
Bet'ya, . . . BURM.	Ani shorinigam, MALEAL.
Kingi . . . of CHENAB.	Ein, Sanoli, . . of RAVI.
Theng mah, . . . CHIN.	Karla, Bhabar, of SUTLEJ.
Neilgherry nettle, . ENG.	

This is a fine tall nettle, with immense leaves and a vigorous sting. It is the most widely diffused of the large Indian nettles, being found in Burma, in Assam, in South Konkan, along the Malabar coast, in Mysore, the Neilgherries, in the valleys of the Himalayas, along the foot of the hills to the Dehra Doon, the northern valleys of the Himalaya, and in many places of the Panjab Himalaya as between Rampur and Sungnam, at 2500 to 7000 feet, where stems are often employed for making twine and ropes by the dry process; but in the N.W. Himalaya these are not prized, as they perish quickly from wet. It is an annual, with erect angular stems, marked with small white specks, in which are inserted stiff, most acute bristles, which produce intense

pain. The bark abounds in fine white, glossy, silk-like fibres, but these probably differ with the locality in which the plant is grown. To the Exhibition of 1851, specimens were sent by Dr. Wight, prepared in a rude way, by boiling, by the Todawar of the Neilgherry mountains. It was a beautifully fine and soft flax-like fibre, which the Todawar race use as a thread material, and, if well prepared, fitted to compete with flax for the manufacture of very fine textile fabrics. Mr. Dickson, by passing it through his machine and liquid, rendered it like a beautiful, soft, silky kind of flax, of which the tow would be useful for mixing with wool, as has been done with the China grass, and the fibre used for the finest purposes. Major Hannay says the Assamese use the fibre extensively in the manufacture of cloth. The Chinese prize it for the softness of its fibre, as well as for its strength. The plant grows wild all over the Neilgherries, it is well known to the natives, and its cultivation might be readily extended. The value put on the fibre was £70 to £80 the ton. As the seeds are quick of vegetation, the cultivation of this plant can be carried to any extent, and the supply might be largely increased, as the plant is abundant and widely distributed over the Indian Peninsula. The fibre from the bark of old wood was steeped in cold water for about six days. The bark of young wood was steeped in hot water for about 24 hours, when the fibre was found to separate readily from the pulp.—*Great Exhib. of* 1851; *Royle's Fib. Plants*, p. 67; *Stewart, P. Pl.; Cleghorn, P. Rep.* p. 68; *Mr. M'Ivor in M. E. J. Reports.*

URTICA HYPERBOREA. *Jacq.*

Zatud, Dzatsult, Stokpo, Tsodma, . . LADAKH.

A small species common in parts of Ladakh from 11,500 to 17,000, and occasionally to nearly 18,500 feet. Its young leaves are eaten as a pot-herb.—*Stewart*, p. 215.

URTICA INTERRUPTA. This large annual grows wild during the rains. The whole plant is covered with stinging hairs, like the common nettle.—*Riddell.*

URTICA JAPONICA. In Japan, its bark is made into lines, cordage, and cloth.

URTICA TUBEROSA. *Roxb.*

Chundur-muli, . BENG. | Chih ma, Tien ma, CHIN.

A nettle of Bengal, China, and the Moluccas, with very small greenish flowers. Its roots and shoots are eaten raw, boiled or roasted, and are nutritious.—*Roxb.* iii. p. 583; *Voigt*, p. 280.

URUMEAH. The very ancient city of Urumeah, Thebarma of Strabo, and supposed birthplace of Zoroaster, is situated in a noble plain fertilized by the river Shar, and on the south-west of the lake to which it gives its name. This town is 32 farsang from Tabreez, and contains a population of 12,000 souls.—*Malcolm's Persia*, ii. 138.

URUS. ARAB. The festival day of a Muhammadan saint, on which oblations are offered at the tomb; also oblations or offerings to a saint; also called Churaghan (lit. lamps or illuminations). Urus-i-baba budun, alias Hyat qalandar, Urus-i-bawa Fuqqur-ud-din, Urus-i-tabber-i-ālam, are Muhammadan ceremonies.

URUSAH-DAR PARDA. PERS. Lit. 'the bride in a veil.' The Indian gooseberry, Physalis Peruviana.

URUVILWA, or Budh Gaya, the town at which Gautama Buddha remained long in a state of abstraction under a Bo Tree.

URVA. The Aryans, in their migration, made their seventh settlement in Urva, the modern Kābul. The Record (in viii. verse 11) alludes to Urva, proved by Haug to be Kābul, the identity of which was previously unknown.

URVA CANCRIVORA. *Hodgs., Blyth.*

Gulo urva, *Hodgson.* | Viverra fusca, *Gray, Hard.*

The crab mungoose; it belongs to a genus of carnivorous mammals, of the family Viverridæ, and sub-family Viverrinæ. It inhabits Nepal, the S.E. Himalaya, Assam, and Arakan, and, according to Mr. Hodgson, it dwells in burrows and is carnivorous.—*Jerdon.*

URVA-PUNDRA. SANSK. An upright mark on the foreheads of the Vaishnava Hindus, made with bright red, yellow, and white colouring substances, to represent the footprint of Vishnu.

URVASI, a celestial nymph who incurred the displeasure of Mitra and Varuna, and descended to live with mortals. She became enamoured of Pururavas. Urvasi is the most famous among the courtesans of Deva-lokum, the heaven of the gods. She is the analogue of Daphne of the Greeks. Urvasi is the nymph of the drama Vikramorvasi by Kalidasa.—*Dowson.*

URYA, the language of Orissa. The original site of the Or or Ordu tribe appears to have had very narrow limits, viz. along the coast-line from the Rasikulia river near Ganjam, northwards to the Kans river near Soro, in lat. 21° 10'; but in the process of migration and conquest, under the Ganga Vansa line, the limits of Orissa (Or-des) were extended to Midnapur and Hoogly on the north, and to Rajamundry on the Godavery to the south. It is a tolerably pure dialect of Bengali. In the direction of Bengal, it follows the coast-line as far as the Hijilli and Tumluk divisions on the Hoogly. On the western side of the Midnapur district, it intermingles with Bengali near the river Subunreka. To the westward, the Gond and Urya languages pass into each other, and at Sonapur half the people speak the one and half the other language. About Ganjam the first traces of Telugu or Teling occur, though the Urya still prevails 45 miles south of Ganjam on the lowlands of the sea-shore, beyond which Telugu begins to predominate. At Chicacole the latter is the prevailing dialect; and in Vizagapatam, Telugu only is spoken in the open country, though Urya, in the mountains, runs farther down to the south. The Urya people are a tall, fair, somewhat slender race. Their country, Orissa or Or-desa, is bounded on the north by Bengal, on the south by the Northern Circars, on the west by Gondwana, and on the east by the Bay of Bengal.

USARA-REWAND, HIND., from Stalagmitis gambogioides, is real gamboge, imported into Ajmir via Pali; considered and used as a violent cathartic. The punsari or druggists suppose it to be the extract of Mirabilis jalapa root; the dose given is sixteen grains; one seer costs four rupees. —*Gen. Med. Top.* p. 148.

USHAS, in Hindu mythology, the dawn, by the ancient Hindus regarded and worshipped as a goddess, now supplanted by Aruna. As the dawn, the early morning, the first pale flush of light, Ushas is compared to a mother awakening her children; to a lovely maiden awakening a sleeping world; to a young married maiden

'like a youthful bride before her husband, thou uncovereth thy bosom with a smile.' As a goddess, she is styled the (Rig Veda, i. 123, v. 2) mighty, the giver of light; from on high she beholds all things; ever youthful, ever reviving, she comes first to the invocation:

> 'Hail, ruddy Ushas, golden goddess,
> Upon a shining car thou comest, borne like
> A lovely maiden by her mother decked,
> Disclosing coyly all thy hidden graces
> To our admiring eyes.'

Ushas, the dawn, the ηως of the Greeks and Aurora of the Romans, with the Hindus is the daughter of heaven and sister of the Adityas, and is called Ahana and Dyotana, 'the illumer.' She is one of the most beautiful myths in the Vedas. —*Dowson.*

USHIRA, a philosopher mentioned in the Padma Purana. His parents were Durvasa and Raka. He lived as a jogi at Sri Saila, and taught that the gods have no visible form, but are to be worshipped in the prayers and incantations of the Vedas.—*Ward*, iv. p. 44.

USHTERANI, an Afghan tribe, considered one of the most warlike of the tribes in the Sulaiman range. About the year A.D. 1840, they colonized in the skirt of the hills, where they hold perhaps 20,000 acres of arable land. They had been constantly engaged in feuds with the Kusrani, a tribe less warlike than themselves, but still by no means contemptible in spirit and enterprise.—*Records of Govt. of India*, No. 11.

USH-TURFAN, a small town, or properly settlement, consists of scattered habitations, possessing neither walls nor fortresses. Its district is said to have forty Yuz-Begi or centurion chiefs, consequently about 4000 houses; but according to other sources 6000.—*Russians in Central Asia*, p. 161.

USIJ, a handmaid of the queen of the Kalinga raja, with whom the sage Dirghatamas associated, and their son Kakshivat was born.

USITA, the father of Sagara, who, on being expelled by hostile kings of the Haihya, the Talajungha, and the Susuvindha races, fled to the Himvat mountains, where he died, leaving his wives pregnant, and from one of these Sagara was born. It was to preserve the Solar race from the destruction which threatened it from the prolific Lunar race, that the Brahman Parswa Rama armed, evidently proving that the Brahmanical faith was held by the Solar race, while the religion of Buddha, the great progenitor of the Lunar line, still governed his descendants. This strengthened the opposition of the sages of the Solar line to Vishwamitra or Buddha of the Lunar line obtaining Brahmanhood.—*Tod's Rajasthan*, i. p. 36.

USMAN, the third khalif successor of Mahomed, A.D. 644 to 656.

USMAN or Othman, founder of the dynasty ruling in Constantinople, was at first the chief of a small territory in Bithynia; but in A.D. 1299 he invaded the whole country of Nicæa, and subsequently extended his country as far as the Black Sea. He was styled Al-Ghazi. Born at Sukut in Bithynia A.D. 1259, died 1326.—*Catafugo.*

USMAN KHEL. Towards the lower extremity of the Swat valley, a formidable range of hills bounding the valley runs for many miles from east to west, nearly parallel to the British frontier; and at the eastern extremity of this range stands the Mora mountain. Between this range and the frontier, however, intervene two tracts, named Ranizai and Lower Osman Khel, both quasi-dependencies of Swat. The best of the passes leading into Swat is one named Mullakund, which opens from Ranizai. A little farther to the eastward of Ranizai, also, there are some passes, leading into the Lunkhor valley, which belong to British Yusufzai. These latter passes are not available for passage from Swat to British territory, because, leading into Lunkhor, they can be stopped by any party holding that valley. The passes via Ranizai and Usman Khel, if the people of those tracts accord a passage, lead straight on to the British plains of Hashtnagar. Above the Lunkhor valley, just beyond the British frontier, is the strong village of Pulli. The subdivisions of the Peshawur district, adjoining the tribes above described, are Lunkhor or north-west corner of Yusufzai, and then Hashtnagar. Ranizai and Lower Osman Khel tribes are subordinate to Swat. —*Elphin. Caubul*, p. 353.

USNEA, a genus of plants belonging to the natural order of lichens. The Usnea plicata, in common with the Roccella tinctoria and other lichens, is used as a dye.—*Eng. Cyc.* See Dyes.

USTAD. HIND. A teacher, a schoolmaster; a master, especially in the shawl trade.

USTAGHFAR. ARAB. Deprecation. Ustaghfar Allah, God forbid.

USTUKHUDUS. HIND. An odoriferous labiate plant, which has generally been attributed to the Lavendula stœchas, but it is a species of Prunella.—*Powell, Handbook*, i. p. 320.

UTAKAMAND, Ootacamund, or Ontikalmanda, a municipal town in the Neilgherry Hills district, Madras, lat. 11° 24′ N., long. 76° 44′ E., containing 10,319 inhabitants. Ootacamund is the chief sanatorium of the Madras Presidency. It lies 7228 feet above sea-level; annual rainfall, 44·88 inches; mean temperature, 58° F. Botanical Gardens (51 acres) were opened during the governorship of the Marquis of Tweeddale (1842-48). It is approached by four ghats,—Coonoor, Seegoor, Kotagherry, Neddiwuttum, and Goodaloor. Ootacamund is nearly in the centre of the table-land of the Neilgherries at the foot of the western face of the peak of Dodabetta, and except to the N.W. the station is completely surrounded by grass-covered hills. Houses are scattered about, with gardens and plantations of Eucalyptus and Acacia, and the broad, excellent roads are bordered by Cassia glauca bushes, honeysuckles, foxgloves, geraniums, roses, and masses of the tall Lobelia excelsa. The population consists of Europeans, East Indians, but mostly migratory. Every European house has three or four fires daily. Ice forms in December and January mornings in the hollows and valleys, scarcely half an inch thick, but sufficiently consistent for all freezing purposes. On the Neilgherries, coffee, tea, and chinchona can be grown to any extent.

UTRARHI, a Sudra caste of Bengal, who at their feasts throw away all the food that is set before them.—*Ward*, iii. p. 977.

UTRASUM. TAM. Utrasum beads are seeds of Elæocarpus ganitrus and of Elæocarpus lanceolatus.

UTRICULARIA, a genus of plants of the natural order Pinguiculaceæ of Lindley. They are watery or marshy herbs, and about 22 species are known to occur in the E. Indies. In British India, U. diantha, fasciculata, nivea, reticulata, and stellaris. According to Walton, one species grows in the Philippine Islands, from the joints of which issues a tendril like that of a vine, at the extremity of which is placed a small receiver resembling a cruet with a neck, and on the top is placed a valve, which serves the place of a stopper. The receiver always stands erect, and is filled with a sweet and pleasant water, except at certain hours, when the valve naturally rises to give room for evaporation; otherwise the repletion could not take place. The contents of four or six of these little vessels are sufficient to quench the thirst of one person. This plant is found in the province of Bisaya, in the island of Luzon; it is evidently one of the pitcher plants.—*Roxb.* i. p. 143; *Walton's State*, p. 121.

UTRICULARIA BIFLORA. *Roxb.* Chota janji, BENG. A leafless floating plant, grows near Calcutta, at the end of the cold and beginning of the hot season, in stagnant water, along with U. fasciculata.

UTRICULARIA FASCICULATA. *Roxb.*

Janji, ... BENG. | Natsao, ... TEL.

Found floating in stagnant water in the vicinity of Calcutta, at the end of the cold and beginning of the hot season.

UTRICULARIA STELLARIS. *Linn.* Buro janji, BENG. A floating water plant of the still, sweet water lakes of Egypt, Ceylon, and of most parts of India. Its roots become distended with air, and these raise the plant to the surface till its flowering is over, when it settles down to deposit its seed in the ground.—*Roxb.* i. p. 143.

UTTARA NAISHADA CHARITA, a poem by Sri Harsha on the Life of Nala, king of Nishada, written about A.D. 1000.—*Dowson.*

UTTARA RAMA CHARITA, a drama by Bhava Bhuti, descriptive of the latter part of the life of Rama. The drama is based upon the Uttara Kanda of the Ramayana, and was probably written about the beginning of the 8th century. It has been translated twice, viz. by Professor Wilson, and by Professor C. H. Tawney.—*Dowson.*

UTTAR-PUJA. HIND. A Hindu ceremonial, dispossessing an image of the deity.

UTTARUKURU, the northern regions. According to Hindu geographers, the continent north of Maha Meru. See Aryans.

UTTFA. ARAB. A large camel howdah, used by the Roala and Ibn Haddal and Ajman Bedouin tribes, when expecting a pitched battle. It is a huge cage of bamboo, covered with ostrich feathers. A girl is placed in it, who sings during the fight, and encourages the combatants. Formerly each large Bedouin tribe had one of these.—*Lady Anne Blunt*, ii. p. 146.

UTTHANAIKA-DASI. SANSK. The day on which Vishnu is supposed to arise from his four months' sleep, being the close of the rainy season. It is the 11th lunar day, which sometimes falls in Kartik, sometimes in Agrahayana.

UVARIA, a genus of plants belonging to the order Anonaceæ or custard apple tribe. About 42 species belong to the E. Indies; those growing in Burma, the Pad-da-gnan, the Ta-mot, the Tauka-dat-gnan, and Tha-myo-pra-tha, have not as yet been specifically determined. U. bicolor, *Roxb.*, and U. bracteata, *Roxb.*, are trees of Sylhet; U. heteroclita is a plant of the Garo Hills; U. elongata, *Roxb.*, is a plant of Chittagong; U. ventricosa, *Roxb.*, is found in Tiperah, and U. macrophylla in Sylhet and Chittagong. A species of Uvaria, Karee, HIND. ? a tree of Jubbulpur, has wood used by natives for making toys. Another Uvaria, Beta-goonda, CAN., grows in the Canara and Sunda forests, and in the jungles inland of Nilcoond, with wood of rather superior quality, being straight and tough. Another species of Uvaria, Thub-bor, BURM., a large tree of Tavoy, has a wood used for boat-building; and a fourth species of Uvaria, Hoom, MAHR., occurs in the Canara and Sunda forests, in jungles east of Kursuli or Black River. It runs tall and straight, wood strong and useful, but is not much known. Dr. Roxburgh described 22 species, but several have since been referred to other genera. —*Dr. Gibson; Voigt*, pp. 14, 15; *Cal. Cat. Ex.*, 1862; *Mr. Blundell.*

UVARIA GRANDIFLORA. *Roxb.*

U. purpurea, *Bl.* | Unona grandiflora, *Lesch.*

A shrub of Burma, Tenasserim, and Sumatra, with large crimson flowers, changing to dark purple. Its fruit has the taste and appearance of the North American pawpaw, and they are members of the same natural family.—*Roxb.* ii. p. 665; *Mason; Voigt.*

UVARIA NARUM. *Wall.*

Uvaria Zeylanica, *Lam.* | Unona narium, *D.C.*

Narum panel of Malabar, a greenish, sweet-smelling oil, which is used medicinally as a stimulant, is obtained by distillation from the roots. The roots are employed in the Mauritius in decoction as tonic and stimulant, and are externally applied for destroying vermin.—*Simmonds; Eng. Cyc.; O'Shaughnessy*, p. 193.

UVARIA ODORATA. *Lam.* Unona odorata, *Don.* A small tree of Burma, Martaban, the Tenasserim Provinces, Sunda, the Moluccas, and China.—*Voigt; Dr. Mason.*

UVARIA TOMENTOSA. *Roxb.* Pedda chilka dudugu, TEL. This has a very strong yellow wood, much similar, but superior, to Nauclea cordifolia. The carrying shoulder sticks or cowar are made from it, also used in house-building; it does not warp.—*Roxb.*

UVARIA TRIPETALA. *Roxb.* Unona tripetala, *D.C.* A tree of the Moluccas. Its largish, greenish-yellow, inodorous flowers appear in March, April, and May.—*Roxb.; Voigt.*

UVULARIA GRANDIFLORA, *Hoffman* and *Schultz*, the Pei-mu and Hiang-ming of the Chinese. A plant of China. Its corms are dug up in spring and in autumn, and are of two kinds,—a larger which is the cheaper, and a smaller, the latter named by the Chinese mother-of-pearl.—*Smith, M. M. C.*

UZBAK or Uzbek, a Turanian race found on the Oxus, in Balkh, Kunduz, Khost, Inderab, Talikhan, Huzrut-Imam, Andkhui, Shibbargan, and Bokhara. In all these districts the Uzbak are mixed with Tajak, the latter being the older inhabitants. The Uzbak are the resident civilised inhabitants of Central Asia. Their physical form has become considerably changed from being intermixed with ancient Iranians, and with many slaves from Persian Iran. The typical Uzbak in Khiva has a broad full face, low flat

forehead, large mouth; while those of Bokhara are less marked. In the neighbourhood of Kashgar and Aksu, the colour is from yellowish-brown to blackish; in Khokand brown, and in Khiva white. Timur was an Uzbak Tartar, but Uzbak power rose on the ruin of the Timur dynasty. The Uzbak considers himself more orthodox than the Afghan. As an ocular demonstration of God's blessing upon their nationality, he points out the numerous tombs of saints scattered all over Turkestan. He invites the Afghan to show him, in his turn, the number of his saints; to enumerate, if he can, how many men of his tribe have won the grace of God and become saints. He taunts the Afghans, who are Sunnis, with having no saints of their own, and being therefore obliged to go in pilgrimage to the Shiaite city, Mashed. They have 32 chief divisions, all known by names, many of them similar to those amongst the Kazak, and from this Vambery supposes the Uzbak to be a colonizing tribe. The Uzbak are Muhammadans. In Khiva and some parts of Chinese Tartary they are brave and warlike, and in this respect they are distinguished from all the other Central Asiatics. Although settled, they retain nomade customs, building houses for stables and granaries, but preferring the raised tent to dwell in. Uzbak men have pretty thick, but never long, beards. The women long retain their white complexion, and, with their large eyes, full face, and black hair, they are not displeasing. In Central Asia, they are highly renowned for their beauty. The Uzbak of Balkh are simple, honest, and humane. Uzbaks are fond of racing at festivals. The Uzbak horses and the horses in Bokhara and Maymena possess more strength than speed. The bride retires to a screened part of the tent, and is followed by the groom.

Mouravief supposes Uzbak to be derived from Uz, his or himself, and Bek, master, thus meaning master of himself, or independent. Klaproth derives it from the people called Ouz or Gouz. By the Arab historians, these were the same as Uigur, a Turkish tribe which formerly inhabited the countries to the south of the Celestial Mountain, that is, Little Bokhara. At the commencement of the 16th century, the Uzbak passed the Sihon or Jaxartes, proceeding westward. Everywhere they spread terror and desolation. They are at present in Balkh, Kharazm or Khiva, Bokhara, Fargana, and some countries in the neighbourhood of Mount Belur Tagh. The Uzbak tribes who inhabit Khiva are the Uigur, Naiman, Kangli-Kapchak, Kiat-Konkrad, and Noikious-mangood. Vambery says the term was in use among the ancient Hungarians as a titular term.

When Uzbak Khan was lord of Dasht-i-Kapchak, he introduced the religion of Islam into his dominions. On the death of Uzbak Khan in 1342, his son, and afterwards his grandson, followed him; but in 1360, Urus Khan, descended from a younger son of Jojy, became sovereign of Kapchak. The seventh in succession from Jojy was much revered by his subjects, and from that time, according to Abul Ghazi Khan, who is partly supported by Khondemir, they called themselves Uzbak; and eventually the Uzbak expelled the descendants of Timur from Mawur-un-nahar, and they still retain possession of Khiva, Bokhara, and Khokand.

Uzbak are the dominant tribe in Khiva. In the 16th century they came from the east of Bokhara, and wrested Khiva from the Sart. They are settled as agriculturists, gardeners, fishers, and fill the highest offices, own the little strongholds, and possess all the lands. The wealth of the Sart is in their houses; the rich Uzbak buy arms. The Uzbak wealth is in land and slaves. He is a hard master, of a sullen and joyless disposition, prone to gross and brutal indulgences. His intellect is dull. They have 32 taifé or tribes,—Akbet, Altchni, Atchmayli, Az, Balgali, Boikulak, Bugurlu, Dormen, Ichkili, Jagatai, Jelair, Kandji-galay, Kanli, Karakursak, Kenegoz, Kettekeser, Khitai, Kiet, Kipchak, Kulan, Kungrat, Manghit, Ming, Mitten, Nayman, Nogai, Noks, Sayat, Taz, Tyrkysh, Uigur, Ushun.

Mouravief estimated their numbers at 30,000 families, E. Kuhlivein, together with the Sarts, at 400,000, and Abbott at 100,000. The Kataghan tribe of Uzbak inhabit the Kunduz province of Afghanistan, north and south of the Oxus. They number 42,000 families.—*Collett, Khiva; Vambery, Bokhara*, p. 244; *Dr. Wolff's Bokhara*, i. p. 312; *Klaproth, Note; Mouravief, Bokhara*, p. 395; *Ferrier's Journey*, pp. 89, 90; *Markham, Embassy*, p. 35; *MacGregor*, p. 527.

V

V. In the English language this letter has only one sound, as in gave, give, love, dove; but in the oriental tongues the initial v is often changed into b or w, and the final v into u. In Sanskrit, v has the same sound as in English; but in Bengali and Uriya, the Sanskrit v is always changed into b, as bari for vari, barsha for varsha; and the same change often occurs in Hindi, as baras for varsha, sambat for samvat; in Bengali, also, which has no v, u is a usual substitute for v; in Gujerati this is reversed, and v is written for b, as vighu for bigha, vimo for bima. Also, in all dialects, particularly amongst the illiterate, there is a tendency to approximate the sound of v to that of w, or to substitute w for v. In Tamil, the change is not uncommon even in the written language, and varam is frequently written waram. The letter wau of the Persian is often pronounced vau; and in the Urdu or Hindustani the pronunciation of the wau is as often that of w as of v, as wakil, vakil; wazir, vizir; darwesh, darvesh; and all Hindus frequently change the wau into a b, as walaiti, balati; nawab, nabab, the nabob of the English. In Mahrati there are both sounds for the same letter, the one exactly like w, the other more like v.—*Wilson.*

VACCINATION, the process of inoculating with the virus from the pox of the cow, in Latin vaccus. The natives of India usually designate it as Tika dalna, to affix the tika, or Sitla nikalna, to remove the small-pox. The British Indian Government keep up great establishments to carry out vaccination, but it has not yet found general favour amongst the natives. Masson says that the camel in Baluchistan is liable to variola, and that the milkers who take this disease are exempt from small-pox attacks. Dr. Cullimore at Mandalay was informed by intelligent natives that a second inoculation is occasionally necessary, and that there are some who, from the hereditary influence

of the disease or some occult causes, are never susceptible to variolous inoculation. Dr. Huillet, late of Pondicherry, undertakes to show that vaccination was known to a physician, Dhanwantari, who flourished before Hippocrates.

VACCINIUM LESCHENAULTII. *Wight, Ic.*

V. arboreum, *Lesch.* | Agapetes arborea, *Dun.*
Andromeda symplocifolia, *W.* | Andoovan, . NEILGH.

A small or middling-sized very pretty tree, abundant on the Neilgherries at the higher elevations, and on the Animallays, Pulneys, and Ceylon mountains. The fruit is about as large as currants. It is an agreeable acid, and makes good tarts. The wood is rose-coloured, with a red heart, wavy-grained, and pleasant to work, and would be excellent for cabinet-work. The Vacciniaceæ, or bilberry tribe of plants, are small trees or shrubs, of which about 13 species are known to occur in the south and east of Asia, in the Neilgherry and Khassya mountains, Tavoy, and Java, in the genera Vaccinium, Gaylussaccia, and Thibaudia.—*Beddome, Fl. Sylv.*

VACH, the Hindu goddess of speech. She is variously described in the Brahmanas, Upanishads, the Mahabharata, and the Puranas, and is identified with Viraj, Satarupa, and Saraswati, styled the divine Vach, queen of the gods, mother of the Vedas, the daughter of Kama, spouse of Brahma, and mother of wisdom and eloquence. Vageswari, another name for the consort of Iswara, and the goddess of speech. Iswara, in this character, is called Vagiswara or Vagisa, the lord of speech. He is also called Siro Deva. —*Moor; Coleman; Garrett.*

VACHASPATI MISRA, author of the law book Vivada Chantamini, of the Mithila school.

VACHELLIA FARNESIANA. *W. and A.*

Mimosa Farnesiana, *Roxb.* | Acacia Farnesiana, *Willde.*
M. Indica, *Poir.* | A. Indica, *Desv., D C.*
Jali mara, ... CAN. | Vaday valli maram, TAM.
Guya babula, BENG., HIND | Tumma, Kasturi, . TEL.
Iri babool, . . . MAHR. | Arimedamu, . . . ,,
Urimeda, Sami, . SANSK.

This armed shrub grows throughout South-Eastern Asia, from Sind and the Himalaya to Malacca, is very common in the Dekhan, Mysore, and Coimbatore. It furnishes a good, hard, tough wood, greatly resembling that of the babool or Acacia Arabica, but the size is very small. It makes excellent ship knees and tent pegs, and it exudes a useful gum-arabic freely and in considerably quantity, from 5 to 12 lbs. annually. The small, deep-yellow, powerfully-smelling, globular-headed flowers, under the name of wattle-flowers, are much employed in perfumery for their delicious fragrance.—*Wight; M. E. J. R.; Voigt; Mason; Rohde.*

VADA, also Wara. GUJ., MAHR. A ward or quarter of a town, as Bahman-wara, the Brahma quarter; Dher-wara, the Dher quarter.

VADA. TAM. North. Vadagalai, lit. the northern branch, a sect among the Tamil Vaishnava, the other sect being the Tenkalai or southern sect. (See Vaishnava.) The Vadagalai sect place two white oblong marks on each side of their foreheads, made of a white earth called teruman, to represent the feet of Vishnu, and in the centre of each mark a red spot or teruchurnam (holy powder) made of rice flour, to represent Lakshmi, the wife of Vishnu. The marks of the Tenkalai are similar but broader, and with a little spot over the root of the nose. The ceremonials of the Vadagalai are more numerous than those of the Tenkalai. Their religious teachers are not celibates. Their upper arms are branded with the chank (sanka) and disc (chakram). They travel with their families, visiting and instructing their disciples. See Left-Hand Caste; Right-Hand Caste; Vaishnava.

VAGHARI or Wagri or Bagri. GUJ. A race of fowlers who snare with nets.

VAHAN. SANSK. A vehicle of the Hindu gods. An animal is appropriated as the vahan or vehicle to each of the mythological personages of modern Hinduism. The swan, eagle, and bull appertain respectively to Brahma, Vishnu, and Siva, and are severally denominated Hanasa, Garuda, and Nandi. Ganesa, eldest son of Siva and Parvati, the elephant-headed god of prudence and policy, rides a rat, supposed to be a very sagacious animal. Kartika, their second son, the generalissimo of the celestial armies, mounts on a peacock. Indra, the powerful regent of the firmament, the Jupiter Pluvius of the Hindus, rides the elephant Airavata, symbolical of might. Varuna, genius of the waters, bestrides a fish, as doth also Ganga, the prime goddess of rivers. Kama Deva, the god of love, is carried by a lory or parrot. Agni, god of fire, has an ardent ram. The Hanasa of Brahma is a goose or swan; Vishnu's Garuda is half man, half bird, and now, in Southern India, identified with the Haliastur Indus, *Bodd.*, or Brahmany kite; Vayu or Pavana, an antelope; Yama, a buffalo; Mungula or Mars, a sheep; Budh, a lion; Shuni or Sani (Saturn), a vulture; Rama, a monkey; Durga or Parvati, a lion and bull; and the other goddesses, the vahans of their respective lords. Kuvera has the horse; Parvati as Durga and Kali rides on the lion and tiger.—*Coleman; Moor; Paterson; As. Res.* vii. p. 48.

VAIJA YANTI, a law book, a commentary by Nanda Pandita on the Vishnu Smriti.—*Dowson.*

VAIKUNTHA or Vaibhra, in Hindu mythology, is the paradise or celestial abode of Vishnu, where he enjoys beatitude in the elysium of Lakshmi's lap. Vaikuntha has been located in the frozen ocean, and sometimes in a subterranean sea of milk. The heaven of Vishnu is described as entirely of gold, and 80,000 miles in circumference. Its edifices, pillars, and ornaments are composed of precious stones. The crystal waters of the Ganges form a river in Vaikuntha, where are lakes filled with blue, red, and white water-lilies, each of a hundred and even a thousand petals. On a throne, glorious as the meridian sun, resting on water-lilies, is Vishnu, with Lakshmi or Sri, the goddess of abundance, the Ceres of the Egyptians and Greeks, on his right hand, surrounded by spirits, who constantly celebrate the praise of Vishnu and Lakshmi, who are served by his votaries, and to whom the eagle Garuda is door-keeper.—*The Mahabharata; Ward, Hindoos*, ii. p. 14; *Moor's Pantheon*, p. 23.

VAIMANIKA, one of the four classes of divine beings reckoned by the Jains.—*As. Res.* xvii. 274.

VAIPEEN. In the year 1341, the sea threw up the small island of Vaipeen, on the north side of Cochin. The waters, breaking through the banks of the river Cocci, swept away the village, and formed a large river and backwater, and so spacious a harbour, that large ships can lie safely

at anchor in the river on the north-east side of the town of Cochin. Vaipeen is thirteen miles long, and one broad. The natives date their era from the period of its origin. It is called the Poodooveypa, from two Malealam words, Poodoo, new, and Veypa, foundation.

VAISAKHA. SANSK. The first month of the Hindu solar year (April—May), the second of the luni-solar.

VAISALI, a famous ancient city of India, founded by Visala, son of Trinabindu. It is a place of Sakya's labours. Its site is now unknown. General Cunningham has supposed it to have been 27 miles N. of Patna, on the left bank of the Ganges. It has also been supposed to be the modern Allahabad. It is not Visala, which is the modern Ujjayini (Ujjain).

VAISAMPAYANA, a learned man who assisted Vyasa in arranging the Vedas.

VAISESHIKA, one of the two great divisions of the Nyaya philosophy established by Kanada, who taught that light is the visible form of God; that spirit and animal life are separate; that when the desire of creation arose in the divine mind, he first gave existence to water, and then to innumerable worlds floating on the waters like the mundane egg; that in these primeval eggs water was contained, on which lay Vishnu, from whose navel issued a lotus, in which Brahma was born, who, receiving instructions from God, created the world first from his mind, and then with the primary atoms.—*Garrett.*

VAISHNAVA, Hindu sectarians, followers of Vishnu. All Vaishnava sects identify Vishnu with Brahma. The subdivisions of the sect are the Bhakta, Bhagavata, Vaishnava, Chakrina or Pancha Ratrava, Vaikhanasa, and Karmahina; each of these again being divided into a practical Karma and a speculative Inyana or G'niana portion. The great teachers have been Ramanuja, Ramanand, Kabir, Asanand, Rai Das, Sena, Dhunna, Pipa, Sur Das, Tulsi Das, Harischandra, Vallabhacharya. Vishnu is believed to have become repeatedly incarnate. Vishnu is now but seldom worshipped, and the sects attach themselves to the worship of Rama and his wife Sita, and to Krishna with his mistress Radha, and to local deities whom the worshippers believe to be incarnations of this deity.

The four principal sects were founded by Ramanuja, Madhava, Chaitanya, and Vallabha. The Ramanuja sect was again divided into two sub-sects, Vadagalai and Tenkalai. The Vallabha sect hold that the way to salvation was through eating and drinking and enjoying the good things of life. In opposition to this sensual view of religion, a modern reformer, Swami Narayana, founded a new sect, and wrote his Sikshapatri, consisting of 212 precepts, which give a good idea of the purer side of Vaishnaism.

Amongst Vaishnava Hindus, in the south of India, the Suttuthavan, TAM., are rigid Vaishnavi; are to the Vaishnavi what the Vira Saiva are to the Saivavi. They are flower-selling minstrels and vagrant mendicants. They are said to have a communism of women, but if so, the practice is unknown to their neighbours.

In Bengal, one-fifth of the population are worshippers of Vishnu in the form of Krishna, and the followers of Ramanand and Kabir are the principal subdivisions of this sub-sect.

The Charan Dasi worship Krishna and Radha. It was founded by Charan Das, who lived in the reign of the second Alamgir, and was a merchant of the Dhusar tribe, a resident of Dehli. His followers are both clerical and secular. At Dehli is the Samadh or monument of the founder.

The division of Gocalast'ha, or worshippers of Gocal or Krishna, is subdivided into three:—

1. Exclusively worship Krishna as Vishnu himself; this is generally deemed the true and orthodox Vaishnava.

2. Exclusively worship Radha as the sakti of Krishna or Vishnu; this sect is called Radha Vallabhi.

3. Worship Krishna and Radha conjointly.

As the Saiva has a fourth undivided sect in the Ganapatya, so the Vaishnava has a fourth undivided sect in the Bhagavata, who recognise all divinities equally.

Most of these comprise a number of subdivisions, and besides these acknowledged classifications, many individual mendicants are to be found all over India who can scarcely be included within the limits of any of them exercising a sort of independence both in thought and act, and attached very loosely, if at all, to any of the popular schismatical sects.

In the south of the Peninsula of India, the Vaishnava have separated into the Tengala and Vadagala sects. The Tengala follow the precepts of Manavala Mununi or Ramyaja Matri, and the Vadagala claim Vedantacharya or Vedanta Desika as their expounder. Both of these holy men were pupils of the same teacher, Ramanuja-Charya. Both sections speak respectfully of the other; both sects worship Vishnu, and, with some minor differences, use the same rites; nevertheless occasionally, at the great festivals, disputes between the two sects often run high, with rioting and bloodshed; also, if of the same caste, they eat together and intermarry, so that the points of difference apparently cannot be of vital importance, but among no other sects have the quarrels been so frequent and so bitter. Since A.D. 1830, in Madras city, owing to the care bestowed by Mr. Edward Elliot, the chief magistrate of police, violence has been put a stop to. The words Tencalei and Vadacalei mean Southern Veda and Northern Veda, and it is surmised that the disputes originated from the assumption by Northern Brahmans of authority over the Southern Vaishnava, and attempts to interfere with their customs and rites. The sects themselves are unable to make the causes of dispute intelligible, but all castes of Hindus are accustomed, by marks on their foreheads, to indicate the sect to which they belong. Accordingly, all Vaishnava mark a trident-like longitudinal mark; but the Tengala commence the middle line a little way down the nose, and the Vadagala only from the root of the nose. Vaishnava women do not make a trident mark, but only a single upright line from the nose to the hair. The Tengala or Southern Veda sect are the most numerous in the southern provinces.

Vaishnava missionaries have largely taught in the women's apartments of Calcutta. The finest temples in Northern India owe their origin to this sect, who have come to regard themselves as a distinct caste. They are known in Bengal as the Baisnab, a dialectal change of Vaishnava, appertaining to Vishnu, but they are not a numerous

sect; in Bengal they have only 428,000 followers; in Southern India, the followers of Chaitanya are known generally as the Satani, which is supposed to be a variation from Chaitanya, or taken from Sanatana, one of Chaitanya's most celebrated disciples; in the southern part of India, they are almost all of the Teling-speaking people, but they have not become numerous.

The most deplorable part of the Vaishnava worship of the present day is that which has covered the walls of temples with indecent figures, and has filled their temples with licentious rites.

As a rule, the dead of the Vaishnava Hindus are burned. As death draws near, a lamp is lit at the bed-head, and a homa sacrifice performed with camphor and a cocoanut; and as life dies away, the five elements are dropped into the mouth of the moribund from a tulsi leaf. Within two or three hours the body is lifted, and this is done early, as none of the household nor any of the neighbours can partake of food until the remains be disposed of. The pile of wood or cow-dung cakes used is about two feet high, and on it are placed some tulsi leaves, a little sandal-wood; and the deceased is laid with his feet to the north. When laid on the pile, a cloth is placed over the face, and raw rice is placed on it over the mouth. The heir of the deceased places a charred bit of sandal-wood or a tulsi branch at each corner of the pile, and a Vityan sets fire to the mat, using fire taken from the sacred fire lit at the bedside of the dying man. On the following day the heir and friends visit the pile, remove the skull and the bones, on which he and all with him pour water and wash them,—wash them with the sikai, anoint them with oil and honey, and clean them with milk, and place them all on plantain leaves anointed with butter. A young cocoanut shoot is then placed on the skull, and the whole put into an unburned earthen pot, and taken or sent to a river or to the sea, the person who conveyed it returning to the temple, where he pronounces aloud the deceased's name, and adds 'pray for him.' Often they are sent to a holy river, even to the Ganges at Benares. The adult male relatives shave. The hair of the Brahman widow's head is shaved. The body is not always carried through the doorway of the house. If it be an inauspicious day, or if the house door be so placed that the courtyard has to be crossed, then the remains are carried through an opening broken in the wall. The remains are unclothed for the last rites. Children under eight years of age and unmarried girls are buried, as also are all who die of small-pox, as the belief is that this ailment is a manifestation of the presence of the goddess Ammun, Mariathi, or Kali, and the anger of the goddess would revert to the family if the body were burned.—*Wilson.*

VAISYA, also Vais, or Bais, or Vesia, the third of the four grand social divisions of Hindus; commonly merchants, traders, cultivators, but individuals of the three others are found practising the duties supposed to be exclusively allotted to the Vaisya. Their industry and economy is striking. The natural duty of the Vaisya is to cultivate the land, tend cattle, and buy and sell. Amongst the earliest dissenters from Indra were the Yadu race, under Krishna's influence. The reasons leading him to this are not known, but the Mahabharata makes him say to Nareda, his father:

'Why worship Indra as the supreme god? O father, we are Vaisya, and our cattle live upon the pastures: let us therefore cease to worship Indra, and pay our devotions to the mountain Govardhana.'

Up to that time it is to the heaven of Indra that the good who die proceed.

Vaisya comes from a Sanskrit root, which is found in many Aryan tongues,—Sanskrit, Vesa, a house; Oikos, Greek; Vicus, Latin; Veihs, Gothic; German, Wich. Dr. Hunter says the Vaisya caste, literally the vis or body of the Aryan settlers, were in ancient times the tillers of the soil. They have gradually abandoned this laborious occupation to the Sudra and mixed castes, and are now the merchants and bankers of India.—*Imp. Gaz.*

VAITARANI. SANSK. To be crossed; the river to be crossed before the infernal regions can be entered.

VAIVASWATA, Yama, or Dharmaraja, also Vaivaswata Menu, 'The man, son of the sun,' the seventh Menu. He was the son of Surya and father of Ikshwaku, the founder of the Solar race of kings.—*Tod's Rajasthan*, i. p. 24. See Deluge.

VAJRA. SANSK. The thunderbolt of Indra. It is a circular weapon, with a hole in the centre; others say two cross bars. Vajra-nabha, the discus of Krishna. Vajra-pani, bearer of the Vajra.

VAJRA SAKHA, the divisions of the Jains established by Dasapurni Vajraswami, the founder of the Mahanisitha sect.—*Is. Res.* xvii. p. 287.

VAKIL, an attorney, an ambassador or agent. It is pronounced also Wakil, and in Baluchistan is a person who transacts every kind of business for another. In Persia, the Vakil is still an officer in the courts of justice, called Vakil-ur-Raya, or 'the advocate of the people.' In the justiciary courts of the British in India a Vakil is a pleader. —*Malcolm's Persia*, ii. p. 453; *Pottinger's Tr.*

VAKILA, a weight used in Arabia for spices, etc., consisting of 10 coffola and nearly 1¼ oz. English; in Bussora, the heavy vakila is 4833 lbs., and the light weight for spices, etc., 1166 lbs.—*Simmonds' Diet.*

VALAI. TAM. Silurus boalis of Hamilton, a fish of the Peninsula. The Valai takes equally well during all the months of the year; the best time to fish for it is from daylight until the sun gets hot, and from four in the afternoon till sun-down; but where weeds or water-lilies exist, the middle of the day is equally as good a time. This fish takes best of all, however, on moonlight nights. The most killing bait is a live bait of about four inches in length, and Kowlie (HIND.) are the strongest and liveliest among the many available sorts to choose from. The Valai is to be found in still, running, deep, and shallow water, but generally in the centre of the stream by day and near the banks at night. This fish, like many others, bites freely after rain when the water is coloured. Its mode of rearing its young differs from that of the cat-fish. The fry swim about near the top of the water while the parents keep watch about a foot below. The Valai is not the Silurus wallagoo of Russell, but the Silurus boalis of Hamilton. The Olai Valai is not the sword-fish; some of these fish are to be seen at any time in the different fish markets.

VALA KHILYA or Kharwa. In Hindu

mythology, 60,000 pigmy sages sprung from the hairs of Brahma. They are guards of the chariots of the sun. Professor Wilson supposes them to be connected with the character of Daumling, Thaumlin, Tamlane, Tom-a-lyn, or Tom Thumb. —*Dowson.*

VALANGANY, about six miles south of Negapatam, has a chapel dedicated to the Virgin Mary, and under the jurisdiction of the Goanese priesthood. According to tradition, an enceinte woman was wandering on the barren plains of Velangany. In her hour of need a lady appeared, and told her where she would find a tree thick with cool and shady foliage, on the brink of a pool of water. She found the shelter, and was delivered of a beautiful child. Some days after, the lady reappeared and told her that she would meet on her way an old man, to whom she was to mention that at the bed of the pool there lay a statue. She met the old man, and he found an image of the Virgin Mary. The chapel was soon after built, the image placed in it, and a prettily-devised altar erected by a Portuguese ship captain, in conformity with a vow made by him when caught in a storm off the port of Negapatam. The Velangany festival attracts a large number of people from Madras to fulfil their vows and present offerings. Many heathens take part in this festival, make their offerings as if they were Christians, and pray to the Virgin for her protection. Some of these people go through acts of bodily penance, such as rolling their naked bodies for a long distance over hot sandy plains under the noonday sun.

VALANKAI or Valangai, in the south of India, the right-hand caste of Hindus, of which there are 18 sections, viz. :—

1. Banijaga or trader.
2. Okhalaga, cultivator.
3. Jotiphana, oil maker, employing the bullock.
4. Rangijiva, dyer or calico-printer.
5. Ladaru, Muhammadan traders and artificers.
6. Gujerati, Gujerat merchants, bankers.
7. Komati, shopkeeper, traders of the Vaisya.
8. Jaina or Jain.
9. Kurubar, shepherd and wool-worker.
10. Kumbara, potter.
11. Agasa, washerman.
12. Besta, fisherman, palanquin-bearer.
13. Padma shalayas, a kind of weaver.
14. Naindu.
15. Upparadu or tank-digger.
16. Chitragaru or painter.
17. Golla or cowherd.
18. Waliya, Pareyan, or Pariah, who is the fighter of the others.

These vary.—*Wilson's Glossary.*

VALENTIA, GEORGE, VISCOUNT, author of Voyages and Travels to India in 1802–6. Along with Captains Keys, Court, and Maxfield, he aided in the survey of the coasts of the Red Sea. In July 1805, Mr. Salt, his secretary, was sent from Arkeeko on a mission to the ruler of Tigre at Antalo. Mr. Salt was accompanied by Captain Rudland of the Bombay army, by Mr. Carter, and two European boys, Pearce and Coffin; the latter rose to be an Abyssinian chief, and forty years later reappeared at Aden. The mission was successful. Captain Court died at Calcutta in 1823, as Marine Surveyor-General at Calcutta.—*E. I. Marine Surveys*, pp. 18–71.

VALENTYN, FRANCIS, the author of an Account of Netherland India, from the Cape of Good Hope to Japan. He was a Lutheran clergyman, born in 1660 at Dordrecht, arrived in 1686 at Batavia as a minister, resided at Japara near Samarang, and then at Amboyna for 12 years, and returned to Holland. He remained in Europe for 11 years, and sailed again for Java in 1705, stayed there 2 years, then in the Spice Island 7 years, and in 1714 he finally returned to Holland. From that time he was engaged arranging his notes, and his first volume, Oud en Nieuw Oost-Indien, appeared in 1724. This was followed by seven others, all fully illustrated, the last appearing in 1726.—*Bikmore*, p. 147.

VALERIAN, a Roman emperor who was conquered by Shahpur at Odessa in A.D. 260. Being taken prisoner, he is said to have been treated by Shahpur with great severity, and eventually flayed alive.

VALERIANACEÆ, *Lind.*, of the valerian tribe of plants in the East Indies, are species of Nardostachys, Valeriana, and Triptostegia. Nardostachys jatamansi, *D. C.*, is the true spikenard of the ancients. It is highly esteemed in India for its perfume, and for its medicinal properties as a remedy in hysteria and epilepsy. The jatamansi or balchur is an efficient substitute for the European article, and is a very useful stimulant and antispasmodic remedy, chiefly employed in hysteric cases. Dose, one to two ounces three times daily. The true valerian, Valeriana officinalis, is a remarkable feline stimulant. V. Celtica is largely employed by eastern nations as a substitute for Nardostachys jatamansi. Wight gives Valeriana, Arnottiana, Brunoniana, Hookeriana, and Leschenaultii, and a kind of valerian takes the place of Asarabacca. The V. Wallichiana is called dala, wala, bala, char-bala mushk, chargodar, also probably tagir or takar.—*Powell*, p. 354; *O'Sh.*; *Murray*; *Beng. Phar.* p. 305.

VALERIANA HARDWICKII. *Wall.*

Asarun, Bala, . . HIND.	Nah'ani . . . of RAVI.
Taggar, ... „	Char . of TRANS-INDUS.

This valerian grows in various parts of the Panjab Himalaya and beyond the Indus, at from 6000 to 12,000 feet; the root is put among clothes to keep off insects.—*Dr. J. L. Stewart.*

VALERIANA WALLICHII. *D. C.*

Mushkw'ali, . . HIND.	Bala, . HIND., JHELUM.

Grows in the N.W. Himalaya at 5000 to 11,000 feet, up to the Indus. Its roots are exported to the plains to be used medicinally.—*Dr. J. L. Stewart.*

VALKYNE, the fatal sisters of the Suevi or Siebi, are the analogue of the twin sisters of the Apsarases, who summon the Rajput warrior from the field of battle, and bear him to the mansion of the sun, equally the object of attainment with the children of Odin in Scandinavia, and of Budha and Surya in the plains of Scythia and on the Ganges, like the Elysium of the Heliadæ of Greece.—*Tod's Rajasthan*, i. p. 67.

VALLABHACHARYA was born A.D. 1479; he was the son of a Telugu Brahman, and originated the worship of the Bala Gopala, the infant Krishna, and the sect thus founded have the name of Vallabhacharya or Rudra Sampradayi. The worship of the Bala Gopala is widely diffused amongst all ranks of Indian society, particularly in the northern parts of India, but is perhaps best known as the religion of the Gokulastha gosains, the title of its teachers. He taught that privation and asceticism is not sanctity, and that it is the

duty of the teachers and their disciples to worship the deity, not in nudity and hunger, but in costly apparel and choice food; not in solitude and mortification, but in the pleasures of society and the enjoyments of the world. The gosains or teachers, like Vallabha, are always married men, always clothed with the best raiment, and fed with the daintiest viands by their followers, over whom they have unlimited influence. Zealous disciples devote to the guru, tan, man, dhan, body, mind, and means. The temples and houses of the sect have pictures, and metallic, often gold, images of Gopal, of Krishna, and Radha, and other deified forms connected with the incarnation. The idol is richly decorated and sedulously attended in daily ceremonies. Besides their public demonstrations of respect, this sect, before sitting down to any of their meals, take care to offer a portion to the idol. Those of the disciples who have performed the triple Samarpana, eat only from the hands of each other, and the wife or child that has not exhibited the same mark of devotion can neither cook for such a disciple nor eat in his society. This part of their tenets has been subversive of all morality, and in 1862 was notoriously brought before the public in a trial for libel instituted in Bombay by one of the teachers, when it was shown that the women of the wealthiest of this sect deemed it an honour to receive the priest's attentions, he selecting one in the midst of and from amongst hundreds of her fellow-worshippers, and allowing visitors to be present while associating with her. In 1868, in Bombay, during the Holi festival, indecent pantomimes were shown by this sect.

Vallabha was the author of the Bhagavat, also of a Bhashya, of one part of Vyasa's Sutras, and of other Sanskrit works, on which the worship of the sect is founded.

Vittala Nat'h, the son and successor of Vallabha, had seven sons, all of whom were teachers, and their followers, though in all essential points the same, form separate communities. Those of Gokul Nat'h, however, look on their own gosains as the only legitimate teachers of their faith. The worshippers of this sect are very numerous and opulent, the merchants and bankers, especially the Bhattia race from Gujerat and Malwa, belonging to it. Their temples and establishments are numerous all over India, but especially at Mathura, and many hundreds at Brindaban. But at Sri Nat'h Dwar at Ajmir is the most celebrated, the most highly venerated, and most richly endowed of all the Gosain establishments. It is a matter of obligation with members of this sect to visit Sri Nat'h Dwar at least once in their lives, and the head gosain presents them with a certificate to that effect. Gosains are constantly travelling over India under the similitude of pilgrims, but reconcile to themselves on these occasions the profits of trade with the benefits of devotion.

Bitthal Nat'h's descendants settled in Sambat 1535 at Mahaban or Gokula, a town 5 or 6 miles below Mathura. His descendants are now the gosains of the temple there. The law members are called Sevakan; their system of doctrine is called Pushti Marg, or way of happiness; and its practice as Daiva Jan, or divine life.—*Growse*, p. 264.

VALLAITI ERA and the Bengal era were established by Akbar. That of Bengal began on the 1st of the month Baisakh 963 + 593 = 1556. The Vallaiti-san was used in Orissa, where it was called the Auel-san, and began on the 1st of the month Aswin 963 + 592 = A.D. 1555.

VALLAM, a small town in the Tanjore district, Madras, 7 miles from Tanjore city. Vallam was captured by the British under Captain Joseph Smith in 1771. The quartz crystals found here are made into spectacles.—*Imp. Gaz.*

VALLARIS DICHOTOMA. *Wall.*

Echites dichotoma, *Roxb.*	Pala malle tivva, . TEL.
Hapurmali, . . . BENG.	Putta podara yarala, ,,

A plant of most parts of India and of Burma, with white fragrant flowers.—*W. Ic.*

VALLARIS PERGULANUS. *Burm.*

Pergularia glabra, *L.*	Flos pergulanus, *Rumph.*
Echites hircosa, *Roxb.*	Emericia pergularia, *Rom.*

A plant of India and the Archipelago, flowers with the smell of a goat.—*Roxb.*; *Voigt.*

VALLISNERIA, a genus of water plants belonging to the natural order Hydrocharaceæ. They are diœcious; the male flowers are seated on a spadix; the corolla is monopetalous, with three segments. They grow at the bottom of the water, and yet the male and female flowers are separated, and the mode by which they are brought together affords a singular instance of adaptation. These plants generally grow in running waters, and thus render the difficulty of the contact of their flowers greater. The female flower has a long spiral prolongation, which, a few days before the flower is ready to be fecundated, rises to the surface of the water, where it floats. The male flower has a very short peduncle, which cannot extend, but the stamens are enclosed in small transparent globules, which detach themselves from the peduncle and become free. Small white pearls then rise to the surface of the water, which open near the flowers. When the fecundation is effected, the female flower again rolls up and sinks to the bottom of the water, where the seeds in the ovary mature.

VALLISNERIA SPIRALIS. *Linn.*

Vallisneria spiraloides, *R.*	Serpicula verticellata, *L.*
V. verticellata, *L.*	Udora verticellata, *Spr.*
V. Jacquiniana.	Huttonia serrata, *Will.*
Saivala, ... HIND.	Punatsu, . . . TEL.

A plant of America, Europe, and India. It grows in clear, standing, sweet water, flowers during the cold season, and consists of simple filiform roots, and a number of fine filiform-jointed shoots or stems, some creeping, some floating below the surface of the water; branches solitary, axillary. The sugar-refiners throughout India use this herb while moist to cover the surface of their sugar, as clay is used in the West India islands; and in two or three days the operation is finished exceedingly well. The Vallisneria is supposed to possess cooling powers. Thus Madhava says:

> 'The gentle pressure of her heaving bosom
> Has spread delightful coolness through my frame,
> As if combined upon my skin were strewed
> Sandal and camphor, Saivala and pearls,
> The lotus fibre on the moonstone's dew.'

Hydrilla verticellata also is employed by sugar-refiners to clarify sugar.—*Powell*, i. p. 306; *Roxb.* iii. p. 751; *Wilson's Hindu Theatre*, p. 71.

VALLUVA, also Valluvadu. TEL. A Pariah race, engaging as priests of Pariah families; the priests of the Pariah race of the south of India.

VALMIKI is supposed to have been born in the kingdom of Kosala, of which Ayodhya was the chief town. He is said to have resided on the banks of the Jumna, near its confluence with the Ganges at Allahabad. He is the reputed author of the Ramayana, a poem written in the Sanskrit language. The framework of the story relates to an exile from Hindustan named Rama, combined with a hero who fought in the south of India, aided by the people, who were delineated as bears and monkeys. Valmiki is said to have been of the predatory Badhak tribe, and some of his verses are thought to intimate that he was a robber, and explain the origin of his name. It is a current belief in many parts of India that he was a Thug; he is also said to have been converted when robbing a shrine, which is constructed into a story of considerable effect in the works of Chand. Valmiki is said to have settled at Chitrakuta at the time of the exile of Rama, but at one time to have resided at Bithul. Tradition has marked a hill in the district of Banda in Bundelkhand as his abode, where he eventually received Sita, wife of Rama, when banished by him, and where her two sons, Kusa and Lava, were born.—*Ward's Hindoos*, iv. 376; *Wilson's Hindu Theatre*, i. 313; *Tod's Rajasthan*, i. 29; *Garrett*.

VALONIA, the acorn cups of Quercus ægilops, or prickly-cupped oak, growing in the Morea. About 2 lbs. of valonia are required for the production of 1 lb. of leather, which is said to be less permeable to water than that made with oak bark, and so heavy as to make valonia the cheapest of all tanning materials except catechu or terra japonica. A mixture of valonia and oak bark may be used with good effect.

VALTA-KADEN, a subdivision of the Nair race.

VAMANA, the fifth incarnation of Vishnu in the form of a Brahman dwarf. The four first avatara are said to have occurred in the earliest, or Satya, age of the Hindus, corresponding in character with the golden or virtuous age of the fabulists of other regions. The fifth happened in the second or Treta-yuga. Maha Bali, though a virtuous monarch, was still so elated by his grandeur, that he omitted essential ceremonies and offerings to the deities; and Vishnu, finding it necessary to check the influence of such an example, resolved to mortify and punish the arrogant raja. He therefore condescended to become the son of Kasyapa and Aditi, and the younger brother of Indra, and assumed the form of a wretched Brahman dwarf. Appearing before the king, he asked a boon, which being promised, he demanded as much land as he could pace in three steps; nor would he desire further, although urged by Bali to demand something more worthy of a king to give. Vishnu, on obtaining the king's promise, required a ratification of it, which is performed by pouring water on the hand of the applicant. As soon as the holy stream had reached his hand, the form of the dwarf began to expand itself, and at length became so enormous that it appeared to extend itself up to heaven; then with one stride he encompassed the earth, with another heaven, and with the third was about to obtain patala, when Maha Bali, convinced that the pretended dwarf was no other than the god himself, fell prostrate in adoration before him, and yielded it up. From this incident of Vamana, Vishnu is also called Trivikrama or the three-stepper. It is maintained by other Vaishnava that the ratifying stream poured on the hand of Vishnu in this avatara was the river Ganga, which, falling from the hand of the miraculous dwarf, descended thence upon his, now Vishnu's, foot, whence, gushing as a mighty river, it was received on the head of Siva. In M. le Gentil's Voyage aux Indes, a rough map or plan is given, from a native original, of the course of the Ganges, in which it issues from the foot of Vishnu, and, falling on the head of Siva, flows in the style commonly seen through the cow's mouth. Vamana Purana, a Hindu religious book, about the 15th century, containing an account of Vishnu's incarnation as a dwarf. It divides its homage between Siva and Vishnu. — *Dowson*; *Moor*.

VAMBERY. Arminius Vambery, a traveller in Central Asia, and oriental scholar. He is a Magyar. He considers the Turanian nations as not less capable of improvement than their Ayran neighbours, but admits that, as a matter of fact, their cultivation has been chiefly derived from the latter. He altogether discredits the theory of an ancient Altaic civilisation, from which the refinement of Western Asia was derived. This question, as he intimates, has an important bearing on the theory which ascribes a Turanian origin to the people by whom the Accadian or original language of Assyria was spoken, and thus virtually refers the civilisation and mythology of Assyria to a Turanian source. His books of travels have all appeared in English, and had a wide circulation.

VAMPYRIDÆ, a family of mammals, comprising the bats, in the following sub-families:—

Sub-Fam. Megadermatinæ.

Megaderma lyra, *Jerdon*.
M. Carnatica, *Ell.* | M. schistacea, *Hodg.*, *Blyth.*, *Horsf.*
Long-eared vampire bat, over all India.
M. spectrum, *Jerdon*, Kashmir vampire bat.
M. Horsfieldii, *Blyth*, of Tenasserim.
M. spasma, *Linn.*, Ceylon and Malayana.

Sub-Fam. Rhinolophinæ, Leafy-nosed bats.

Rhinolophus perniger, *Jerdon*, *Hodg.*, *Blyth*.
R. luctus, *Temm.* | Large leaf bat, . . ENG.
Nepal? Malabar? Java? Darjeeling.
R. mitratus, *Blyth*, Chybassa, Mussoori? Central India.
R. tragatus, *Hodg.*, *Blyth*, Nepal, Mussoori.
R. Pearsonii, *Horsf.*, *Blyth*, Darjeeling, Mussoori.
R. affinis, *Horsf.*, *Blyth*.
R. rubidus, *Kelaart.* | R. cinerascens, *Kelaart.*
Malabar? Ceylon, Burma, Malayana.
R. rouxi, *Tem.*, *Blyth*.
R. lepidus, *Blyth.* | Rufous leaf bat, . ENG.
Malabar, Calcutta, Colgong, Mussoori.
R. macrotis, *Hodg.*, *Blyth*, Himalaya, Nepal, Mussoori.
R. subbadius, *Hodg.*, *Blyth*, Nepal, Himalaya.
R. brevitarsus, *Blyth*, Darjeeling.
Several other species of Rhinolophus occur in the Malayan Islands, China, and Japan.
Hipposideros armiger, *Ham. Bn.*
H. nobilis, *var.*, *Blyth.* | Large horse-shoe bat, ENG.
Nepal, Mussoori, Darjeeling.
H. lankadeva, *Kel.*, Ceylon.
H. nobilis, *Cantor*, Burma, Ceylon, and Malay Peninsula.
H. speoris, *Bl.*, *Ell.*
H. apiculatus, *Gray.* | H. Dekhanensis, *Sykes.*
H. penicillatus, *Gray.* | Indian horse-shoe bat.
India generally, Ceylon, Archipelago.
H. cinerascens, *Blyth*, Panjab, Salt Range.

H. murinus, *Jerdon.*
Rhinolophus fulgens, *Ell.* | Little horse-shoe bat, ENG.
S. India, Ceylon, Nicobars, Burma, Malayana.
H. larvatus, *Horsf.*, Burma, Malayana, Sylhet.
H. nobilis, *Cantor*, Malay Peninsula.
H. diadema, *Cantor*, Malay Peninsula.
H. galeritus, *Cantor*, Malay Peninsula.
Cœlops Frithii, *Blyth*, tailless bat of Sunderbans.
Rhinopoma Hardwickii, *Gray, Blyth*, the long-tailed leaf bat of all India, Burma, Malayana.
Nycteris Javanica, *Geoff.*, Java, Malacca.

VAN, a province of Asiatic Turkey, with a town, in lat. 38° 29′ N., long. 43° 10′ 35″ E., and a lake of same name. The population of the city of Van is about 12,000, chiefly Muhammadan and Armenian families. Van is the modern name of the town of Semiramis.

Lake Van, a salt lake about 40 miles long and 20 to 30 broad, surrounded by a beautiful outline of mountains, whose tops are covered with perpetual snow. The old, ruined, stone-built town of Ardische is situated on a narrow strip of land running into the lake. The borders of the lake about it are low and swampy, and abound in wild-fowl and various other kinds of game. On the N.W. and E. of Lake Van dwell the formidable Rewandoozi tribe. They amount to upwards of a hundred thousand families. In the winter they live amongst their embattled rocks, but in the milder months roam about, pitching their tents from valley to valley. The wild Amadi and Bitlisi tribes are their near neighbours. They and the entirely lawless Rewandoozi may be regarded as the most legitimate representatives of the ancient Carduchians, and probably neither in manners nor language are much changed since Xenophon traversed their country on his way to Armenia. —*Porter's Travels*, ii. p. 471. See Iran; Kurdistan

VANA. SANSK. A grove, a forest; hence Van, Wan, and Ban, wild. Vana-Chara (mas.), Vane-Chari (fem.), fauns, dryads, sylvan guardians, lit. wanderers of the woods. The names of the Banjari and of the Sunderbans are supposed to be from this word.

VAN ABASSI, a kind of moiré made in the province of Van.

VANA-BHATTA, author of the Kadam-bari, a highly-esteemed Hindu poem.—*Ward*, iv.

VANAPRASTHA, in Hinduism, a man who has gone through his scholar and householder life, and has entered the third Asrama or hermit life, has gone prastha to the woods (vana). It is the Hylobios of the Greeks. According to Menu, when the father of a family perceives his muscles become flaccid, and his hair grey, and sees the child of his child, let him seek refuge in a forest, abandoning all food eaten in towns, and his household utensils; let him repair to the lonely wood, committing the care of his wife to her sons, or accompanied by her if she choose to attend him.—*Wilson.*

VANDA CŒRULEA. Near the village of Lernai on the Jaintia Hills are oak woods, on which Vanda cœrulea grows in profusion, waving its panicles of azure flowers in the wind. This is the rarest and most beautiful of all the beautiful orchids. The dry grassy hills which it inhabits are elevated 3000 to 4000 feet. The trees are small, gnarled, and very sparingly leafy, so that the Vanda which grows on their limbs is fully exposed to sun, rain, and wind, and its roots sprawl over the dry, rough bark. The atmosphere is on the whole humid, extremely so during the rains, and at the flowering season the temperature ranges between 60° and 80°. There is much sunshine, and both air and bark are dry during the day. It is under these conditions that all the finer Indian Orchideæ grow, of which are to be found Dendrobium, Farmeri, Dalhousianum, Devonianum, etc., with Vanda cœrulea; whilst the most beautiful species of Cœlogyne, Cymbidium, Boblophyllum, and Cypripedium inhabit cool climates at elevations above 4000 feet in Khassya, and as high as 6000 to 7000 in Sikkim. Wight gives V. pulchella, Roxburghii, spathulata, and Wightiana? Several are found in Borneo inferior to none of those from India. One gigantic species introduced into England Dr. Lindley named V. Lowii, the individual plant fetching a price varying from £3 to £10.—*Hooker, Jour.* p. 319; *Low's Sarawak*, p. 64; *W. Ic.*; *Mason's Tenasserim.*

VANGUERIA, a genus of plants belonging to the natural order Cinchoniaceæ, small trees or shrubs having ovate or oblong petiolate leaves with lanceolate stipules, solitary on both sides. The fruit of V. edulis is eaten by the natives of Madagascar and the Mauritius, where, as well as into the Peninsula of India and into China, it has been introduced. V. spinosa, Mayna, BENG., which is found in many parts of the plains of India and China, is a distinct species, though united to the above by Sprengel in his Syst. Vegetabilium. The fruit is eaten. V. macrophylla occurs in Chittagong.

VANGUERIA EDULIS. *Vahl.*

V. cymosa, *Gærtn.*	Vavanga edulis, *Vahl.*
V. Comersoni, *Desf.*	V. Chinensis, *Rohr.*
V. Madagascariensis, *Gmel.*	

A native of Madagascar, but introduced into Mauritius, India, and China.—*Eng. Cyc.*; *Roxb.*; *Voigt.*

VANGUERIA SPINOSA. *Roxb.*

Meynia spinosa, *Lamarck.*

Mayna, . BENG., HIND.	Pindi luka, . . . SANSK.
Alu . . . of BOMBAY.	Pedda munga, . . TAM.
Bangari ki lakri, . HIND.	Vadaniko, . . . TEL.
Voa vanguier, . MADAGA.	Chega gadda, . . ,,

A bush or small tree which grows to the height of 25 feet, with a circumference of 1½ feet. The bark is employed medicinally in fever. The dried berries are given to cattle, and the fresh berries are sometimes eaten by people.—*Genl. Med. Top.*; *Captain Macdonald*; *Roxb.*; *Voigt.*

VANILLA plant has been introduced into India, Bourbon, and Mauritius during the 19th century. It adapts itself readily to the climate, can be easily propagated and cultivated, occupies very little space, and the fruit is valuable. All the coffee districts are admirably adapted to the vanilla, but in Ceylon and in parts of the Neilgherries and the Wynad, the plant will not grow in the shade, as it does in Mexico and Brazil, and when trained on trees it soon gets out of reach, which is inconvenient, as the flowers require to be artificially impregnated.

Vanilla has grown well in the Lal Bagh, Bangalore. It was planted in a mixture of leaf-mould and sand, and trained to climb stone pillars seven feet high and three feet apart, with cross pieces atop to form a lattice-work for branches to cling to. Rough bark trees, such as the mango, will also serve as supports for the plant. It

flowers the third year of planting, but does not produce fruit unless artificially fertilized.

In its native country the plant continues to bear from thirty to forty years, and yields, in ordinary seasons, from forty to fifty pods annually, or, say, half a pound weight, so that each plant may be considered equivalent in value to twenty rupees per annum.

M. Genève of the Mauritius found the plants grow better when supported by the Moringa pterygosperma, the Avocado or alligator pear, Persea gratissima, and the Bixa orellana.

The pods should be carefully dried, by exposing them on cloth to the sun's rays, and, while warm, they should be wrapped in woollen, which promotes evaporation, and at the same time absorbs the moisture. When thus treated, the pods blacken and put on a silvery lustre. On this appearing, they must be again exposed to the sun and thoroughly dried. A fully-developed and properly-ripened pod should be from six to seven inches long, about three-eighths of an inch in diameter, and of a very dark-brown colour, almost approaching to black. They should also be moist, and if properly ripened before being packed, they become after a time covered with a circular crystal, which adds to their appearance and marketable value.

VANILLA AROMATICA. *Swz.*
Epidendron vanilla, *Linn.* | Flore viridialbo, *Plum.*
Menaes geraes . . of BRAZIL.

Vanilla aromatica is said by Martius to yield the true vanilla, but the best Mexican vanilla is the produce of V. planifolia, of which Pereira mentions V. sativa and V. sylvestris as two varieties. It is used in confectionery to flavour chocolates, creams, liqueurs, etc. The vanilla genus of plants belongs to the natural order Orchiaceæ, of which V. aphylla, V. aromatica, V. planifolia, V. Walkeriæ, V. Wightii are grown in the East Indies. Dr. Falconer discovered a species while on his visit to the Tenasserim Provinces in 1849.—*Wight's Icones; Voigt.*

VANNAN, a caste of washermen in Malabar, who can only wash the clothes of inferior castes.

VANNIAR, of Telingana, oil-pressers.

VANNIO, a race in Gujerat, seemingly identical with the Banya or Banyan; they are of the Jain religion. It is the Vani or Wani of the Mahrattas, and is doubtless from the Sanskrit Vani. In Gujerat they are classed as Vaishnava, or as Jain Vannio, both of whom are shopkeepers, merchants, bankers.

VANSA or Bansa. SANSK. A race, a tribe, a family.

VAR or War, a Hindi syllable largely used in composition, meaning according to, after the manner of.

VA'RA or Va'sara. SANSK. A week of seven natural days, named after the planets, and arranged in the same order as they are in the European week. The names of each day (beginning with Sunday, and adding vara to each) are, 1. Ravi, 2. Soma, 3. Mangala, 4. Budha, 5. Gura, 6. Sucra, 7. Sani. The tabular notation of the feriæ, or days of the week, is 0 for Sunday, 1 for Monday, and so forth to 6 for Saturday, 7 being accounted zero.—*Warren's Kala Sankalita.*

VARAGON is an inferior sort of rice, cultivated largely in the French settlements, as well as in the interior of the Madras Presidency. It is round, and of a grey colour. When cooked, it becomes a paste, and is often made into an inferior kind of bread.

VARAHA, or the Boar. In this, the third avatara of Vishnu, he is generally represented four-handed, armed as usual, and with the head of a boar, on whose tusks rests a crescent, containing in its concavity an epitome of the earth, which had been immerged in the ocean as a punishment for its iniquities. So that this, as well as the first and second avatara, seems to be a repetition of the story of the deluge. The second combines with it a portion of astronomical allegory, and none of the other of the ten avatara have any apparent reference to the catastrophe, so pointedly indicated by the three first, which are understood to have occurred in the earliest ages. In Hindu legends, as well as in the mythological romances of Greece and Egypt, the boar is an animal very frequently introduced. In an ancient legend, relating to the destruction of the city of Mahabalipuram, and the seven pagodas, on the coast of Coromandel, by an earthquake and inundation, it is stated that Hirancheren, a gigantic prince or demon, rolled up the earth into a shapeless mass and carried it down to the abyss, whither Vishnu followed him in the shape of a boar, killed him with his tusks, and replaced the earth in its original position. See Boar.

VARAHA LANCH'HANA. SANSK. The boar signet, a symbol of royalty in use by the Chalukya dynasty whilst ruling at Kalian. It was the most celebrated of all their badges. It was the symbol invariably represented on their money and on their seals. Sometimes, in the latter, accompanied by the conch shell, the drum, the peacock fan, or a lotus, an elephant goad (ankus), candelabra, a seat or stool, the swastika cross 卐, and latterly a sword. Rajputs at the vernal equinox hunt the wild boar, and at a few places Hindus worship the image of the boar. In the south of India, the coin called by Europeans a pagoda, the hun of the Muhammadans, received its Hindu name from the people from having on it the figure of a boar, hence Varaha-mudra, boar-stamped. The boar was invariably stamped on all Chalukya coins.—*Tr. Hind.* i. p. 328. See Titles.

VARAHA MIHIRA, an astronomer, author of the Vrihat-sanhita and Brihaj-jatika, who was born at Ujjain A.D. 530, died A.D. 587 (Saka 509). He made some remarkable observations on the moon and on eclipses. He had, however, a strong taste for astrology, and fell into the error which Aryabhata had exposed. Telugu astronomers consider that Varaha Mihira flourished in the 3600th year of the Caliyug (A.D. 499), *i.e.* at the close of the second Padah of the Ayananss, when the sun, moon, and equinoctial points (according to the doctrines of the Surya Siddhanta) were in the first point of the Hindu sidereal zodiac; or, in other words, when the Rishi were in the first point of the solar sign Mesha *r*, and in the same of the lunar mansion Aswini.—*Warren.*

VARAHA MIHIRA, another astronomer, thought by many to have been contemporary with the emperor Akbar, but whom writers are apt to confound with Varahacharya and others of the same name.

VARANES, also Varanus, the Roman designa-

tion of the name of Bahram, which was borne by five of the Sassanian kings.

Varanes I. A.D. 274 (Sm.), 271 (Mordt.), the 4th king.
Varanes II. ,, 277 (Sm.), 274 (Mordt.), the 5th king, styled Segan Shah.
Varanes III. ,, 294 (Sm.), 291 (Mordt.), the 6th king.
Varanes IV. ,, 390 (Sm.), 389 (Mordt.), styled Kerman Shah.
Varanes V. ,, 420 (Sm.), 420 (Mordt.), styled Bahram Gor.

See Bahram; Sassanian Kings.

VARANIDÆ, the varanians or water lizard family of reptiles of the order Sauria, comprising the two genera Varanus and Hydrosaurus, of which the following species are known to occur in the East Indies:—

Varanus Dumerilii (Monitor Dumerilii, *Muller*). Brown, with obscure cross-bands, with a black spot on side of neck. Shields of the head and over the orbit nearly equal, moderate. Scales large, convex. A native of Borneo.

Varanus heraldicus (Monitor heraldicus, *Gray*). Black, with cross-rows of pale-eyed spots, pale beneath, black-banded. Shields over the orbits small, sub-equal. It is a native of India.

Varanus lunatus. Nostrils large, nearly central, shields over the orbit small, sub-equal. Dark-brown, with lunate bands directed backward on the neck and forwards on the body, and with cross-bands on the tail; belly and under side of tail whitish. Found in India.

Varanus nebulosus (Monitor nebulosus, *Gray;* M. nebulatus, *Schlegel*), the coloured varan. Nostrils large, rather nearer the orbit than the end of the muzzle; orbital shield with a large series; back of neck with converging dark streaks. A native of India, Bengal, and Siam.

Varanus ornatus, the Philippine varan. Nostrils large, central; shields over orbit small, sub-equal. Olive; neck and front of the body with pale-spotted, broad, black cross-bands; the hinder part of the body and tail with pale spots. A native of the Philippine Islands.

Varanus rudicollis. Nostrils large, nearer the orbit than the end of the muzzle; shields over the orbits nearly square, the hinder central ones rather larger. Scales of the back triangular, keeled; of the neck large, prominent; muzzle elongated. Black, with white streaks on back of neck, and bands across the back. Found in the Philippine Islands.

Other Indian species are Varanus flavescens, *Merr.*, Ganges, Indus, Penang; V. dracæna, *L.*, Bengal to Ceylon; V. nebulosus, Bengal, Siam; Hydrosaurus salvator, *Lour.*, Ceylon, Siam, China. —*Gunther, Reptiles.* See Reptiles.

VARARUCHI, supposed to be same with Katayayana, a celebrated Brahman, son of Somadatta, distinguished for his wonderful memory, which enabled him to recite perfectly any discourse he had once heard. He instructed Nyadi, and both of them were writers of note on philological subjects. They were contemporaries of Nanda, who reigned at Patalaputra in the 4th century before Christ, and was one of the predecessors of Chandragupta. Vararuchi is one of the earliest commentators of Panini. He was one of the nine gems (Nava Khanda) of Vikramaditya's court.—*Garrett.* See Nava Khanda; Pali.

VARAVARAHA. Sansk. An outcaste, a man with curly hair, a barbarian, and supposed the source of the Greek Barbaros, the Roman Barbarus, and the Barbarian of the British.

VARENA. Ghilan is a district known to the ancient Aryans as Varena. It was their thirteenth settlement, and the curse of Ahriman there was irregular menstruation. Ghilan formed the nucleus of the ancient possessions of the Aryans in Media. 'Varena with the four corners,' Haug has shown to be Ghilan.

VARI. Hind. A turn, a man's turn to work; a joint-owned well.

VARNA. Hind., Sansk. Colour; hence a tribe, a class, a caste. Varna sankara, Sansk., the mixed caste of Hindus. Varna, colour, is the term used by Hindus to indicate the race.—*W.*

VARNISH. A varnish is a solution of a resin or of a gum-resin in a liquid, which being spread over a surface, evaporates, and leaves the solid in the form of a brilliant, transparent film. The principal substances used in varnishes and their solvents are the following:—

Solvents.	Solids.		Colours.	
Oil of nuts.	Amber.	Elemi.	Camboge.	Annotto.
Oil of linseed.	Anime.	Benzoin.	Dragon's blood.	Red Sanders.
Oil of turpentine.	Copal.	Colophony.		
Oil of rosemary.	Lac.	Mastic.	Aloes.	Cochineal.
Alcohol.	Dammer.	Resin.	Saffron.	Indigo.
Ether.	Sandarach.		Turmeric.	

The resins or gums and the solvents may be used either singly or combined. One of the most desirable qualities in a varnish is durability, which depends greatly on the comparative insolubility of the resin employed, its hardness, toughness, and permanence of colour. The art of the varnish-maker requires, for its successful prosecution, a considerable amount of chemical knowledge, and the greatest care.

Amber resists the action of ordinary solvents, and requires to be fused at a high temperature. It is hard, and moderately tough, and its colour is scarcely acted on by the air. The objections to amber are its costliness, and the length of time required for amber varnish to dry. It does not become full hard under many weeks.

Those recognised by British varnishers are classed as cabinet, copal, carriage, wainscot, spirit and turpentine, white hard and brown hard varnish. Copal, mastic, and amber varnishes are much employed by the artist and by the photographer.

The Semecarpus anacardium yields a resinous juice, which is known as the black varnish of Sylhet. The black varnish of Malabar is from Holigarna longifolia. In China and Siam, Augia Chinensis yields a varnish; and in Japan, black varnishes are obtained from Rhus vernix, R. succedaneum, and R. verniciferum. In India, a varnish is obtained from the Buchanania latifolia, and another from the Odina wodier. The Martaban varnish is obtained from Melanorrhœa usitatissima. Stagmaria vernicifolia yields the Japan lacquer. Black varnish of Moulmein is used as first coat before gilding, on lacquered boxes and on pagodas.—*Local Committee, Moulmein.*

VARNISHED WARE. In the Burmese process of making this ware, a wooden frame, of wood covered with strips of bamboo woven together so as to form a basket, is the framework of the intended cup; the weaving is like that of a lady's work-basket, and care is taken that it shall be as thin and light as possible, as upon this matter the beauty and delicacy of the ware will

depend. Towards the edges, the weaving is of a coarser nature, and the bamboo is made as fine as hair. The varnish is named thit-tsi (wood-oil), and may be gathered at all times, but if taken during the flowering season, which is at the beginning of the year, it does not harden well. It appears to be in many of its properties analogous to China varnish, and it affects in a similar way the health of those who prepare it. Those unaccustomed to it frequently find their hands blistered, and their arms and faces swollen with its effects. All who use it take certain precautions against accidentally swallowing any portion, and they are careful to touch it with the right hand only, while they take their food with the left. Some persons are more seriously affected by the varnish than others, and its injurious effects appear in blotches so much resembling leprosy that the other Burmese refuse to hold intercourse with the affected person. The varnish is laid on with a brush, to spare the hand as far as practicable; but in all future operations on the same vessel, it is laid on with the hand, both in order to procure a fine surface, and to enable the workman to reject the minutest particles of dust. When first laid on, the varnish looks of a light-brown colour, but rubbing with the hand turns it to a fine black. When the cup is varnished, it must be carefully shut up in a box, to exclude the dust, and then deposited in a deep cold vault. This is said to be essential to its proper setting, and with one of which every manufactory is provided. The cup is kept in the vault at least three days.

In the third process, the cup is covered over with a thick black paste, which is intended to stop up all holes in the baskets, and to give the ware a body. Different pastes are used for this purpose, but all agree in being composed of some fine powder mixed up with thit-tsi; in one sort, the powder is that of calcined bones; in another, the fine sawdust of teak wood. In all cases the paste is dabbed on with the fingers, so as to hide the basket as far as the workman is able to do. After this process, as well as after every other in which the varnish is used in any shape, the cup is returned to the vault, where it must remain at least three days before any subsequent operation can be proceeded with.

In the fourth and fifth processes, the cup is ground smooth inside and outside. The operation is performed on a clumsy lathe, which is turned backwards and forwards with a stick and leather string like a drill-bow. The workman smears the cup with water mixed with an ochrey red earth, turns the lathe rapidly with his right hand, and presses a piece of pumice-stone held in his left hand against the inside of the cup; this process soon rubs down the rough surface of the paste, and is continued until it is quite smooth.

Sixthly, the cup is covered on the inside with an additional quantity of paste of finer quality, which is laid on by the workman after the outside is ground smooth, and dried, in order that it might receive an additional polish on a subsequent day.

In the seventh part of the process, the cup is covered with fine paste on the outside as well as on the inside. In this stage the cup is ground outside and in, and has also received a coat of fine varnish. This is the result of two successive operations with the interval of at least three days between them; the grinding is performed on the lathe, as in Nos. 4 and 5, but instead of pumice-stone the workman employs first a piece of smooth sandstone, then a rag with charcoal and water, and lastly a piece of moist cloth. The cup is dried well in the sun before the varnish is laid on, which is done with the finger.

In the next step, the cup receives a second coat of varnish, and is quite black and glossy, but not even on the surface. Thus far all the Burmese ware goes through the same processes, whatever may be the style in which they are to be finished, whether black or red, plain or figured.

In the ninth part of the process, the cup is simply polished in the lathe. This is performed by turning first against a piece of smooth stone as in No. 7, then by moistened rice husks held in the hollow of the left hand against the cup while turning; thirdly, by a rag dipped in well-pulverized teak wood; and lastly, by the hand smeared with a peculiar polishing powder, said to be made of the petrified wood of a tree. The ware thus furnished is like the black japanned ware used in Britain.

In red colour ware, the colour used is said to be superior to the best Chinese vermilion; it is moistened with an oil called shazi, extracted from the kunyen (Dipterocarpus turbinatus), and then mixed with thit-tsi varnish. The mixture is laid upon the cup after it has gone through the two first operations, and nothing more is required than giving it a polish with the hand, unless extraordinary lustre is desired, when a mixture of shazi and thit-tsi is applied.

Siamese.—In cups executed in Shan or Siamese style, the engraving is done with great ingenuity and rapidity, although the only tool is a needle tied to a stick and whetted on a bit of slate. The artist holds the cup on his knees with his left hand, and keeps his graver almost motionless in his right; he then dexterously turns the cup by the help of his knees to meet the graver. The Shan style consists in engraving a piece of black ware, and filling up the hollows with vermilion; if any figures are represented, they are left in relief, in the manner of wood engraving. The vermilion is laid on, and after drying several days is rubbed off on the lathe with wet bran held in the hollow of the hand. The operation is generally repeated to ensure a complete filling up of all hollows, and the cup is afterwards varnished and polished.

A more expeditious method, called the Burman style, consists in engraving upon a red cup, and filling up the hollows with different colours, usually yellow or green. Some specimens are engraved with grotesque Chinese-looking figures, and with the lines filled with yellow or primrose. The engraving is first prepared by being varnished over, and the colour is immediately rubbed in with the finger until it is quite dry. When the cup is finished, sometimes a small quantity of indigo is mixed with the orpiment, which produces a green colour. The beauty of the engraving consists chiefly in the contrast of bright colours, and the regular interlacing of minute lines, in which some specimens resemble our engine-turning; taste in drawing is totally out of the question.

Other modes of preparing the varnished ware are followed. The finer sorts are sometimes finished with gilding or with raised figures or mouldings.

These are formed of teak-wood paste, which is pressed when soft into tin moulds, and when dry it becomes as hard as the wood of which it was originally made. Europeans have found this paste an excellent material for making the raised work on picture frames and similar objects. Some articles are diversified by leaving portions of the basket-work uncovered by the varnish; in this case the weaving is of the finest quality, and the open parts being of different patterns, the effect is very good. Larger works are made of wood joined together with teak paste, and afterwards covered in the same way as the basket-work, the only difference between the processes being that in the wood-work the first varnishing is omitted, the solid and flat surface of the wood taking the paste at once without preparation.

Chinese.—Mr. Williams says that the beautiful appearance of the lacquered ware of China owes its lustrous colouring to a composition of lamp-black and the clarified juice obtained from a species of sumach called Rhus vernix or R. vernicia. Wood-oils are obtained from other plants of the same family, and the different qualities of lacquered ware are owing to the use of these inferior ingredients. The real varnish tree is about 15 feet in height, and when seven years old furnishes the sap, which is carefully collected from incisions in the trunk opened in summer nights. The body of the ware is wood partially smoothed, or pasteboard, upon which two or three coats of a composition of lime, paper, and gums are first laid, and thoroughly dried and rubbed. The surface of the wood is also hardened by rubbing coarse clay upon it, and afterwards scraping it off when dry. Two coatings of lamp-black and wood-oil, or, in the finer articles, of lamp-black and varnish, are laid upon the prepared wood, and after drying the clear varnish is brushed on, one coating after another, with the utmost care, in close and darkened rooms, allowing it to dry well between the several coats. The articles are then laid by to be painted and gilded according to the fancy of customers, after which a last coating is given them. The varnish is brought to market in brownish cakes, and reduced to its proper fluidity by boiling; it is applied to many purposes both as a varnish and paint, when it is commonly mixed with a red or brown colour. A beautiful fabric of lacquered ware is made by inlaying the nacre of fresh and salt-water shells in a rough mosaic of flowers, animals, etc., into the composition, and then varnishing it. Another kind, highly prized by the Chinese, is made by covering the wood with a coating of red varnish three or four lines in thickness, and then carving figures upon it in relief. The great labour necessary to produce this ware renders it expensive. A common substitute for the true varnish are the oils of the dryandra, jatropha, croton, and other members of the euphorbiaceous family, expressed from their seeds.

In *Peninsular India*, the varnish used by moochee men for palanquins, etc., is prepared by melting sandarus (a kind of copal or anime, called by Dr. Ainslie sandarach), and mixing it with boiled linseed oil, rendered dry by litharge; they do not usually add spirits of turpentine in the way prescribed for making copal varnish in England. Condapilly moochees, for ornamenting boxes, palanquins, etc., dissolve a little aloes in the varnish which is laid over it. A very good varnish is prepared by moochees with shell-lac and wood-oil heated in small quantities.

Wood varnish for teak and Chittagong wood may be prepared by melting three or four bits of sandarus of the size of a walnut or small egg, and pouring upon it a bottleful of boiling linseed oil previously rendered dry by boiling litharge or other drier, and after boiling them together for an hour, gently adding, while cooling, a teaspoonful of Venice turpentine. If too thick, it may be thinned with spirits of turpentine. It should be rubbed on the furniture, and after a little time, during which it may be exposed in the sun, rubbed off; the rubbing should be continued daily, and the polish should not be again applied for eig. or ten days, after which it may be slightly applied every one or two months. Water does not injure this polish, and any stain or scratch may be rubbed over with the polish, which cannot be done with French polish.—*Rohde, MSS.; Fortune's Residence*, p. 146; *Williams' Middle Kingdom*, i. p. 121; *Journal Royal Asiatic Society.*

VARNISH TREE. This name is applied to the Dryandra cordata; that of China is the Elæococca vernicia; also Rhus acuminata, *D.C.*, R. succedanea, *Linn.* The black varnish tree of the Chinese is the Melanorrhæa usitatissima, *Wall.*, of Munipur, Pegu, Tenasserim, and Tavoy. It is very extensively used for paying the bottoms of river boats.

VARSHA. Sansk. The third season of the Hindu solar year, comprehending the months of Sravana and Bhadrapada, when the sun is in the signs Carcata and Sinha, answering to the Tamil months Adi and Avani.

VARSHA. Sansk. A region. Of these, nine are named as situated between the great mountain ranges of the earth, viz. Bharata-v-India, Kunpurusha or Kinnara, Hari, Ramyaka, Hiranmaya, Uttaru Kuru, Ilavrita, Bhadraswa, and Ketu-mala.

VARTHEMA. Ludovico di Varthema, a Bolognese, travelled in India and the Eastern Seas from A.D. 1503 to 1508. First he sailed to Alexandria, and, entering on the Nile, arrived at Cairo. Then, returning to Alexandria, he took ship to Baruti (Beyrut), and travelled by Tripoli to Aleppo. From Aleppo he went southward by Aman (Hamath) and Menin (near Helbon) to Damascus. On the 8th of April 1503, he set out from Damascus with the Haj caravan to Medina and Mecca, and he is the only Christian to this day who ever succeeded in reaching these holy places by that route. There he heard of the arrival of the Portuguese by the Cape of Good Hope, in the east, from a Moor who traded with Venice and Genoa, and who complained bitterly to him that articles of merchandise were not arriving at Mecca as usual, and of the king of Portugal as the cause. From Zida (Jiddah), the port of Mecca, he took ship and went on to Chameram, Gezan, and Aden, the strongest city that was ever seen on the level ground. It has walls on two sides, and on the other sides there are very large mountains. On these mountains there are five castles, and the city contained about five or six thousand families. Here some Moors who had escaped the barbarities of the Portuguese denounced Varthema as a spy. But he was sent to the Sultan at Rhada, who ultimately released him, and he re-embarked

at Aden for Diu Bandar in the Persian Gulf, and Diu in India. He visited Goa (Gogo ?), and thence returned to Gulfar in the Persian Gulf, and onwards to Muscat and Ormuz. He visited Eri under the ruler of Khorasan, and returned via Shiraz to Ormuz. Failing to reach Samarcand, he sailed from Ormuz to Cambay, and visited Chaul, Dabul, Gogo, Bijapur, and all the ports on the west coast, then up along the Coromandel coast to Covelong and Coromandel, and S. to Ceylon, and again N. to Pulicat and Bengal, Pegu, Malacca, Siam, Sumatra, Borneo, Java, and the Moluccas, and returned to Negapatam on the Coromandel coast, where he met twenty-two Portuguese. He went to Quilon and Calicut and Cannanore, where he entered the service of the Portuguese, and was present in their great sea fight in 1506 with the Zamorin fleets. Finally, he returned via the Cape of Good Hope to Lisbon, where he was warmly welcomed by Don Emanuel, king of Portugal.

VARUNA, one of the oldest of the gods of the ancient Hindus, of the times of the Vedas. He is the god of the waters, the analogue of Neptune. He is regent of the west, and lord of punishment, in which latter capacity he resembles Yama, and, like him, holds a snaky cord or noose with which he binds incorrigible offenders under the water. His vahana or vehicle is the fabulous fish called makara. Varuna is Uranos (Ουρανος) of the Greek mythology, the vault of heaven personified. Two hymns in the Rig Veda are addressed to him. He gave a son to king Harischandra, and required the same as a sacrifice. Varuna is rain, the sky, or hemispheric firmament, resting on the waters, and has obvious analogies with the Grecian Uranos. To this god, singly or associated with Mitra, are offered the rare and perfunctory prayers for protection from sin, which appear in one or two of the Vedic hymns. A common medium between the Grecian and Aryan mythology may be inferred, and that Mena and the Aswini, Anna and Varuna, were not (so to speak) indigenous.

VARUNI, a festival on the 13th of the latter half of Chaitra, in honour of Varuna. If it fall on a Saturday, it is of especial sanctity, and is termed Maha-Varuni.

VASANT'HI, amongst the Rajputs, is spring personified, as the consort of Har, and is worshipped by them. On the first spring day, the Rajput princes and vassals open the season with a great boar hunt. On that day personal danger is disregarded, as want of success is deemed an omen that, during the year, Oomia, the great mother, may refuse all petitions.

VASANTOTSAVA, Madhotsava, or Kamotsava is a festival held on the thirteenth and fourteenth of the Hindu month Chaitra, at which Kama Deva, the god of love, was formerly worshipped. The season was one of much merriment, and the general influence of returning spring was hailed with music and jollity. Part of the amusement of the people consisted in splashing each other, by means of syringes, with water or fine-powder, coloured with saffron. A missile commonly used in some places is rose leaves, large baskets and trays of which are prepared for that purpose. The festival of Kama Deva holds its place in the calendar, but its observance is restricted to a few places. In fact, it seems to have merged into the Phalgunotsava or Holi, celebrated a month before, when the like merriment and affusion of coloured powder or water takes place. In the south of India, Kama is worshipped at this period also, which still further identifies the origin of the festival, although it has undergone some important modifications in date and purpose. — *Wilson's Hind. Theat.* ii. p. 268.

VASCO DA GAMA with three vessels sailed from Lisbon on the 8th July 1497, touched at Melinda, on the African coast, and anchored off Calicut on the 22d May 1498. On first landing, the Zamorin of Calicut received him with cordiality and kindness, but afterwards, on the representations of the Muhammadans, Gama was forced to set sail for Europe, and he re-entered the Tagus on the 29th August 1499, after an absence of 26 months. After him, Cabral commanded an expedition, and Da Gama, in 1502, again visited India. He called on the Zamorin for satisfaction for an insult to Cabral, and it being refused, he fired on the place, and went to Cochin, where he left Pacheo with a few men, and returned to Portugal.

VASHISHTA, a famous rishi or sage of the Vedic ages, one of seven rishi, husband of Arundhati, author of several of the hymns in the Rig Veda, also of a law book. He was the family priest of Nimi, son of Ikshwaku, who was the son of Manu Vaivasvata. Vashishta and Visvamitra are historical persons, and two modern schools were named after them. There are many legends regarding Vashishta in the Rig Veda, the Aitareya Brahmana, the Mahabharata, the Vishnu Purana, the Markandeya Purana.— *Ward's Hindoos*, iv. 19.

VASTU YAGA, a Vedic rite practised by Hindus to sanctify a new house; without its performance, no house can be occupied. Each vastu or home is supposed to have a protecting snake, the Vastu sarpa. The rite consists of offerings of water, fruits, flowers, on a sacrificial altar or vedi, and prayers. On the morning of the day previously fixed for entering a new house, the Hindu owner performs the usual morning prayers and ablutions, and, having thus purified himself, he presents, according to his means, pieces of gold to Brahmans, a waterpot is filled with water, and on it are placed fruits, flowers, and mango leaves.—*Elliot, Sup. Glos.*

VASU, in Hindu mythology, a name of eight semi-divine beings, personifications of natural phenomena, whose names are variously enumerated. In the Vishnu Purana they are thus given:—1. A'pa, water, or, according to others, Ahar, day; 2. Dhruva, the pole-star; 3. Soma, the moon; 4. Dhara, earth; 5. Anila, the wind; 6. Anala or Pavaka, fire; 7. Pratyusha, dawn; 8. Prabhasa, light. They are represented as always attendant on their leader, Agni or Fire, and in their relationship to this deity and to the worship of the sun and light, seem to belong to the Vedic period of Hindu mythology. — *Williams' Nala*, p. 215; *Wilson's Vishnu Purana*, p. 120.

VASU-DEVA, son of Sura, of the Yadava branch of the Lunar race. He was father of Krishna, and Kunti, the mother of the Pandava princes, was his sister. He married seven daughters of Ahuka, and the youngest of them, Devaki, was the mother of Krishna. After the death of Krishna and Bala Rama, he also died, and, according to the Mahabharata, four of his wives burned themselves with his corpse; but the Vishnu Purana

says that he and Devaki and Rohini burned themselves at Dwaraka.

VASUKI, in Hindu mythology, a serpent which the Hindu gods used as a rope or thong when they churned the sea of milk to obtain the amrita. He was called also Sesha, also Ananta, and was king of the serpents who live in Patala.

VASUNDA, a festival for Andal, goddess of the Hindus, in the Natagasalai Teppakulam, Strivilliputur. In front of the tank is erected a pandal, decorated with plantains, sugar-canes, and garlands of flowers, and illuminated with lanterns, globes, and lustres. Early in the morning she is placed on the middle mantapum of the tank, and young and old come to worship the goddess. At night the goddess is taken to the temple in a long and pompous procession through the streets of the town, which are studded with pandals.

VATERIA, a genus of plant of the East Indies, of the order Dipterocarpaceæ. There are four species known, V. Zeylanica, *Wight*, of Ceylon; V. lanceæfolia, *Roxb.*, of Assam and the Khassya mountains; V. Roxburghiana, *Wight, Icon.*, a tree of the Peninsula of India; and V. Indica, of the western coast of Peninsular India and Mysore. A species of this genus, the Le-toak of the Burmese, is plentiful in the Tenasserim Provinces. It is a handsome wood, suited for cabinet-work, the purposes of the turner, and other purposes requiring a wood of dense structure.—*Major Benson; Wight's Icones; Roxb.; Voigt.*

VATERIA CEYLANICA. *W. Ill.* p. 88. Stemonoporus Wightii, *Thw.* A large tree in the forests between Galle and Ratnapura, and at Palmadolla near the latter place; wood not known.—*Thw. En. Pl. Zeyl.* p. 37.

VATERIA INDICA. *Linn.*

V. Malabarica, *Bl.*

Dupa mara,	. . .	CAN.
Piney varnish tree,		ENG.
Indian copal tree,	.	,,
White dammer tree,		,,
Gum-anime tree,	.	,,

Chloroxylon dupada, *Ains.*

Payani,	. . .	MALEAL.
Hal-gass,	. . .	SINGH.
Piney maram,	. .	TAM.
Vellay, Kungilium,		,,
Dupada chettu,	.	TEL.

This large and stately tree grows to the height of about 60 feet. It has entire, smooth, coriaceous leaves, and terminable panicles of white flowers. The young shoots and all tender parts, except the leaves, are covered with fine stellate pubescence. It is common in the hotter parts of Ceylon, up to an elevation of 2000 feet; it grows in Canara and all along the Malabar coast; it is found also in Mysore. Its wood weighs 26 lbs. to the cubic foot, and its timber is said to last ten years. In Ceylon, its timber is used for packing-cases, ceilings, coffins, etc.; on the western coast of India, it is said to be an excellent building timber, not liable to be attacked by the teredo, and much employed in ship-building. The dupada resin is used as a fragrant incense in temples; the quantity procurable is very considerable. It is obtained by wounding the tree, and in commerce occurs either in small lumps or in large masses, generally of a shining appearance and balsamic smell. It has a very cellular structure, which is attributable to the mode of collection. Notches being cut in the trunk of the tree sloping inwards and downwards, the resin collects in the cavity, and is either permitted to dry on the spot, or is collected and dried by the application of heat. It is of all shades, from light-green to light-yellow or white, and is usually translucent. Specimens are sometimes seen, in which, from the desiccation having been improperly conducted, the resin is more opaque, of a dull-green colour, and full of air bubbles, presenting the appearance of having undergone a partial fermentation. This resin may be recognised by its cellular appearance and balsamic smell; this latter, however (which is, of course, due to the volatile oil it contains), is gradually lost by long keeping or constant exposure to the air. What is called East Indian copal, and sold in England as gum-anime, exudes abundantly from this tree. Candles are made of this resin in Malabar, which Dr. Wight informs us diffuse in burning an agreeable fragrance, give a fine clear light with little smoke, and consume the wick without snuffing. These candles were at one time introduced into England, but a very high duty having been imposed, the trade ceased. A solid oil is prepared from the seeds, and is called piney tallow or dupada oil, Piney yennai, TAM., which is used for lamps, but is very suitable for soaps and candle-making. The oil from the seeds becomes perfectly solid even in hot climates, and is prepared by cleaning the seed, then roasting and grinding them into a mass. To 5 seers of seed add 12 seers of water, and boil until the oil rises to the surface. Remove the oil, stir the contents of the vessel, and allow it to stand until the following day, when more oil will be observed on the surface, which may be collected and the process repeated.—*Thw. Enum. Pl. Zeyl.; M. E. J. R.; Roxb. Flor. Indica; Voigt.*

VATERIA LANCEÆFOLIA. *Roxb.* This middling-sized tree is common in Sylhet, and grows in Assam and the Khassya mountains. It has entire, smooth, coriaceous leaves, and terminal panicles of white flowers. It flowers in April and May, and fruits in July and August. It is valuable as a timber tree. It exudes a clear liquid from wounds, etc., in the bark, which soon hardens into an amber-coloured resin. From this the natives distil a dark-coloured and strong-smelling resin called Chooa, also Chova, HIND., and sell it and gond or gum, which the Brahmans use as an incense. — *Roxb.* ii. p. 601; *Voigt; Royle's Him. Bot.; Eng. Cyc.; Mason.*

VATERIA ROXBURGHIANA. *Wight, Ill.* Common in some of our western coast forests, particularly in the South Canara jungles, and planted in avenues, etc., in Travancore; also indigenous in Ceylon, where it is called Mendora. Its timber is much valued in Ceylon, but is not in use in India; the tree produces a gum-resin.—*Beddome, Fl. Sylv.* viii. p. 95.

VATESWARA DATTA, according to some authorities, is the name of the father of Prithu, Prithwi, or Prithi-raj, but by other writers his father was named Someda or Vigraha Deva, and his grandfather Saruga Deva or Visala Deva. The term Datta is also more appropriate to a man of the Vaisya tribe than a Rajput, but then Vateswara is called a Samanta, a term especially implying a warrior and a chief, and, as in the case of the Jat, the agricultural tribes occasionally follow a military life. These considerations, however, leave the individuality of the author very doubtful.—*Asiatic Researches*, xv. p. 407; *Transactions of Royal Asiatic Society; Hindu Theatre*, ii. p. 154.

VATHEK, the hero of the tale by Mr. Beck-

ford, who is made to visit the Takht-i-Jamshid. According to the work called Khalassut-ul-Akhbar, Vathek died of dropsy in the month of Zehuj, 232 Hijira, or A.D. 846.

VATICA, a genus of plants of the East Indies, of the natural order Dipterocarpeæ. They are large trees of great economic value, and the recognised species are V. faginea, grandiflora, Helferi, and scaphula, *Dyer;* V. laccifera, obtusa, robusta, and tumbuggaia, *W. and A.* They are useful as timber trees and for their resins.

VATICA LACCIFERA. *W. and A., W. Ic.*

Shorea talura, *Roxb.* | S. robusta, *Roth.* not *Roxb.*
S. laccifera, *Heyne.* | Talura, ... TAM.

A large timber tree of Mysore and of the Balaghat mountains, Naikenary, Nundidrug, Palghat, where it blossoms during the dry winds, and ripens its seed in June. It is very abundant in the hill forests of Cuddapah and North Arcot, and is also found in the Mudumalli forests, Animallays, Wynad, Mysore, etc. Its timber is very useful for house-building, panels of doors, and various other purposes; it has a ready sale in the Cuddapah district, and is largely imported into Madras. A species of lac is procured from the tree.—*Beddome, Fl. Sylv.; Roxb.; Captain Puckle in M. Ex. of* 1862; *Useful Plants; W. and A.*

VATICA ROBUSTA. *W. and A.*

Shorea robusta, *Roxb.*

Saj, ... ARAB. | Sala, ... SANSK.
Eing-gyin, . . . BURM. | Uswukunida, . . ,,
Sal tree, . . . ENG. | Guggalam chettu, . TEL.
Sal, ... HIND. | Salwa, Soringhi, URIYA.

Its Resin.

Ral, Rala, Dhoona, HIND. | Guggala, ... TEL.

This valuable timber tree is alluded to in ancient Hindu writings. In the Hindu Theatre (ii. p. 100), Madhava, speaking of the coming rainy season, says—

. . . . 'The days approach
When the long line of clouds shall shed on earth
Their amaranthine drops, trembling in the breeze
That from the east comes powerful, and embued
With the rich odours of the Sal and Arjuna.'

Forests of it extend over a narrow belt from Kamaon to Assam, and the dammer of Bengal is the resin exuded from it. It grows in the Palghat mountains and to a limited extent on the west coast. West of Burhampore and Russelcondah, the sal forests are the most valuable tract of wood on the eastern coast of Peninsular India. In the taluk of Gumsur and in the zamindari of Bodogoda, the sal forests are important and accessible, for these districts are traversed by rivers, and during the short freshes timber can be rafted to the coast. Captain Beddome found it abundant on the Indrawati. Captain Sankey says that the sal of Nagpur, resembling bejasar somewhat in colour, differs peculiarly from it in the construction of its grain, and in its freeness from the faults to which the other is so subject. In strength, size, and all the qualities of good timber, it appeared to him to stand first of all those procurable in the Nagpur territories for a tie beam or rafter wood. The sal forests of Northern India, according to Dr. Falconer, extend in a nearly unbroken belt along the Terai from the Ganges at Hardwar to the Burhampooter; and it occurs also in the Morung Hills, and in Assam; but in many parts at the foot of the Himalayas, the forests are said to have become much exhausted.

Its seed has the utmost susceptibility of germination, with a vitality so limited in duration that it will not survive many days unplanted. It ripens at the commencement of the rains, and after the first shower falls actually sprouting from the tree. In consequence, young plants come up in the utmost profusion, forming patches of forest, which are literally impenetrable till thinned by the woodman. The tree Vatica robusta furnishes the best and most extensively used timber in the north of India. In Pegu, the tree is found chiefly on the Shan side of the Tounghoo district, and in the forests north of Tounghoo, and it is abundant inland in the Amherst and Tavoy provinces. Sal timber suffers much from exposure, splitting and warping greatly. The wood is hard, of a light-brown colour, and is in great repute; it is most valuable for house and ship building, as vats for liquids, door-frames, and for the rails and battens of doors. It is not suited for planks; it twists, shrinks, and warps whenever the surface is removed, even after many years' seasoning. This wood is in general use for building purposes in the Ganjam and Vizagapatam districts. Compared with teak, its strength is about 1121 to 869. In the Madras gun-carriage manufactory, it is used for beams of gun and howitzer carriages, light field axle-cases of all kinds, all parts of carts, transport carriage cheeks, handspikes of all sorts, perches of waggons, poles, short perches, braces, framing and splinter-bars of limbers, gun and waggon, and framing of all carts. The bark is employed by tanners, and yields an abundance of resin or dammer, which is used as a substitute for pitch, and burnt by the natives as incense, and an aromatic oil is procured from the resin by dry distillation. It is called Sal and Salwa in Gumsur, and Googul in the Godavery forests. Colonel Beddome is not sure that the Burmese tree called Eing-gyin is the same species.

VATICA TUMBUGGAIA. *W. and A.*

Shorea tumbuggaia, *Roxb.* | Sal tumbuggaia, *Roxb.*
Congo-wood tree, . ENG. | Tumbuggaia, . . . TEL.
Thambagam, . . . TAM. |

A large timber tree, a native of the Balaghat? mountains, which blossoms in the beginning of the hot season, and ripens its seed in June. In the Balpalli jungles, in the Cuddapah district, the tree abounds, particularly on the ridges of the hills from Balpalli to Yerra Gunta Cottah, and over all the ridges of the hills in the Cuddapah district, growing to a height of from 30 to 35 feet, and from 6 to 7 feet in circumference. It is there chiefly used for house-building purposes, being much prized by the natives of the district on account of its durability. Its wood is used for fuses; it is a strong, heavy wood, close-grained but splintery, superior in strength and finer in grain than sal, too heavy for gun-carriages, but would answer for all purposes where great strength is necessary. It yields a large quantity of the resin called dammer, which is employed in marine yards as a substitute for pitch, but used also as benzoin in temples for incense.—*Roxb.; Voigt.*

VATSYA, a learned Hindu who wrote in the Sanskrit language, about the beginning of the Christian era. His book is the Kama Sutra, or Aphorisms of Love, and is the standard work on love and on social and domestic life in that language. It was composed by him whilst a religious student at Benares. He alludes in it to the

writings of seven earlier authors. He inculcates the necessity of education and cultivation of the 64 arts. Dowson also says that he wrote the Nyaya Bhasha, and that he was known under the name of Malla Naga.

VATTEZ BATTU, an ancient Tamil writing character, still in use by the Moplah in South Malabar.

VAYPI, an island near Cochin, which was thrown up from the sea in the 14th century, and gave rise to a new era, Puduvepa, new introduction.

VAYU. SANSK. Air, wind, Æolus, the atmosphere; one of the gods of the ancient Hindus; the god of winds and the regent of the north-west.

VEDA. The religious books of the Hindus, known as the Vedas, are four in number,—the Rig Veda, the Yajur Veda, the Sama Veda, and the Atharva Veda, but the last of these belongs to a much later age than the rest. Of the four, the Rig Veda is the oldest, and the Yajur Veda, Sama Veda, and the Atharva Veda follow in succession.

Each Veda is subdivided into three parts,—Sanhita, Brahmana, and Sutra.

The Sanhita of the Rig Veda is purely a lyrical collection, comprising the store of songs which the Aryans had brought with them from their ancient settlements on the banks of the Indus, and which they had used in their invocations for prosperity on themselves and their flocks, in their adoration of the dawn, in celebration of the struggle between the god who wields the lightning and the darkness, and in rendering thanks to the heavenly beings for preservation in battle.

The songs are here classified according to the families of the poets to which they are ascribed. This is a purely scientific arrangement, irrespective of their date.

It is known that the sacred books known as Vedas were numerous, and the tradition is that their arrangement into their present form was made by a person who is designated Veda-Vyasa, literally Veda-compiler.

The Sanhita of the Sama Veda, and both the Sanhitas of the Yajur Veda, consist of verses relating to the Soma offering which have been extracted from the Rig Veda; and the extracts forming the Sama Sanhita seem to have been made prior to those of the Yajur Veda.

The object of the Brahmanas is to connect the sacrificial songs and formulas with the sacrificial rite, by pointing out, on the one hand, their direct mutual relation; and, on the other, their symbolical connection with each other.

The Sutras or Aphorisms are founded on the Brahmanas, and must be considered as their necessary supplement, as a further advance in the path struck out by the latter in the direction of more rigid system and formalism. They are the Kalpa Sutra or Srauta Sutra relating to ritual, and the Griha Sutra or Smarta Sutra relating to domestic ceremonial.

The Smarta Sutra exhibit the complete standpoint of Brahmanism.

The language of the Vedas is not Sanskrit in the strictest sense of the term, but there is not sufficient difference between it and classical Sanskrit to authorize its being called a separate language. The difference is not so great as between Anglo-Saxon and modern English, but it is greater than between Homer's and Demosthenes' Greek. The names of the rishi or composers are not always given in the body of the hymns, and there is nothing to guide the historian or chronologist as to their dates. Nevertheless, good scholars are of opinion that Vedic hymns were composed mostly about the fifteenth or seventeenth centuries before Christ, but not committed to writing, and therefore not collected, until the eighth century B.C.

The Veda offers one of the best illustrations of the manner in which ancient literature was preserved in early times. The art of writing was unknown in India before the end of the ancient Vedic literature, about B.C. 800. Now the oldest Sanskrit manuscript we possess cannot be much older than A.D. 1000; but the sons of the three higher castes were required to learn by heart the sacred text. At the present day, youths in some of the Brahmanic families can repeat the whole of the Rig Veda, learned, as their ancestors acquired it thousands of years ago, from the mouth of a teacher, so that the Vedic succession should never be broken. Various readings from these 'walking Rig Veda manuscripts' are being collected for an edition which is to be published in the Sacred Books of the East.

Veda is derived from Vedali, contracted Vetti, he knows, one of the verbs commonly used in Sanskrit, and from which several words are derived of frequent occurrence, as vidya, learning; vidivan, a learned man, etc. This verb, also, has been preserved as vidanti, SANSK.; eidonta, GR.; vident, LAT.; witon, ANGLO-SAXON; and wit, ENG. The body of Vedic literature is immense. In the Brahmana, moral precepts, religious instruction, and information are conveyed.

Their Age.—Good scholars are of opinion that the Vedic hymns were composed after the 17th century B.C., but not collected until later. Professor Wilson supposed them to belong to the 8th century before Christ. But another view has been that the Sanhita or hymns were collected about B.C. 1200 or 1300, and that the Brahmana was written about B.C. 700 or 800; while Professor Max Muller fixes the years 600 and 200 B.C. as the limits of that age during which the Brahmanic literature was carried on in the strange style of the Sutra. According to Colebrooke, at the epoch of the Vedas the summer solstice was in the middle of As'lesha, the 9th lunar mansion; therefore Regulus was half a lunar mansion + 9°, that is 15° 40′ east of the summer solstice, at that time. On 1st January 1859, the longitude of Regulus was 147° 52′ 30″, hence Regulus was at that date 57° 52′ 30″ east of the summer solstice. The summer solstice had therefore retrograded through 42° 12′ 30″ = 42° 20′ 8″ since the epoch of the Vedas. And as the equinoxes and solstices move backward on the ecliptic at the rate of 1° in 72 years, it must have occupied 70° × 42° 20′ 8″ = 3039 years to effect the change. Hence the age of the Vedas was 3039 on the 1st January 1859, or their date is B.C. 1181, *i.e.* the early part of the 12th century before the Christian era.

Only a comparatively small portion of the Vedas has ever been translated, nor is it ever likely that the whole mass of Vedic literature will ever see the light in a modern language. Indeed, Roth calculated that the mere Sanhita or metrical

portion of the Vedas, as distinguished from the Brahmana or later ritual appended to each, contains not less than 30,000 couplets, of which 11,000 go to the Rig Veda. The Rig Veda comprises 1017 short poems, containing 10,580 verses.

Portions of the Rig Veda were translated by the late F. Rosen, the late M. Longlois, and by Professor H. H. Wilson; and Dr. F. Max Muller, who undertook to produce a complete one, has unweariedly devoted much of his useful life to this object. With all their difficulties, they furnish much information regarding the origin and early state of some of the races who are now called Hindus. From what has been published, it is known that during the period through which the Vedas were being produced, the people were progressing in moral culture and in social and political condition. In the earliest period of their migration, they had no money. Their wealth consisted of cattle, horses, sheep, goats, and buffaloes; the cow was the medium of barter. Cow-stealing was a great crime, but from the Rig Veda it is evident that the cow was not reverenced; they had apparently no temples nor images, and they were a cow-eating and spirit-drinking people. In later hymns there is mention of cities, of commerce, of weapons, of chariots, and even of the vices of primitive civilisation. Women throughout held a high social position. The rishi and his wife conversed on equal terms, went together to the sacrifice, and practised austerities together. Lovely maidens joined in processions, and grown-up daughters remained without reproach in their father's house.

The religion of the Aryans, as shown in the Vedas, differs in many very material points from that of the Hindus of the present day. The worship they prescribe is, with a few exceptions, domestic, consisting of oblations to fire, and invocations of the deities of fire, of the firmament, of the winds, the seasons, the moon, the sun, who are invited by the sacrificer, if a Brahman, or by his family priest, if he is not a Brahman, to be present, and accept the offering, either clarified butter or the fermented juice of the soma, Sarcostoma brevistigma, which are poured upon the sacrificial fire, in return for which they are supplicated to confer temporal blessings upon the worshipper, riches, life, posterity, which constitute the sum of heathen prayer in all heathen countries. The second hymn of the Rig Veda thus invokes the gods Indra, Mitra, Vayu, and Varuna:—

'1. Approach, O Vayu, be visible; this soma juice has been prepared for thee; approach, drink, hear our invocation.

'2. Those who praise thee, Vayu, celebrate thee with sacred songs, provided with store of soma juice, and knowing the season suitable for their oblations.

'3. Vayu, thy assenting voice comes to the sacrificer; it comes to many through the offering of the libation.

'4. Indra and Vayu, this juice has been prepared; come with benefits for us; verily the libation desires you.

'5. Vayu and Indra, observe the libations, being present in the offerings, come quickly.

'6. Vayu and Indra, mighty men, approach the priest of the sacrificer quickly, on account of his prayers.

'7. I invoke Mitra, the source of purity; I invoke Varuna, able to destroy; both cherishing earth with water.

'8. Mitra and Varuna, be pleased with this propitiatory offering; for to you, assuredly, do sacrifices owe their success, as the waters do their abundance.

'9. Mitra and Varuna, all-wise divinities, formed for the benefit of multitudes, and multitudinously present, give efficacy to our acts.'

Thus the hymns indicate primarily a worship of the elements, for other Deva named are Agni (Ignis), lord of fire; Surya, the sun; Marut, storms; Prithivi, the earth; Ap, the waters; Ushas, the dawn; Varuna (Ουρανος), the heavens; and to them the hymns are addressed.

Indra, as god of the firmament; Varuna, god of the waters; Yama, the judge of the dead; Agni, god of fire; Surya, the sun; Soma or Chandra, the moon; Vayu, the god of winds; the Marut, the Aditya,—all of them mere personifications of the powers of nature,—were invoked for aid or their wrath deprecated.

The gods of the Vedas were 33 in number, and some of them are not unknown to later systems, but at first perform very subordinate parts; whilst those deities who are the principal objects of Hindu worship of the present day, are either wholly unnamed in the Vedas, or are noticed in an inferior or different capacity. The names of Siva, of Durga, of Kali, of Rama, of Krishna, so far as research has gone, do not occur in the Vedas.

On the other hand, these sacred books contain many passages indicative of a purer thought. Sometimes they expand in glowing adoration of the attributes of the deity invoked, the 'one king of the breathing and awakening world,' whose greatness 'the snowy mountains and the sea proclaim,' 'whose shadow is immortality' (i. p. 29). Sometimes they embody the confessions of the penitent craving for forgiveness. 'Through want of strength, thou strong and bright God, have I gone wrong; have mercy, Almighty, have mercy!' (i. p. 39). 'Whenever we men, O Varuna, commit an offence before the heavenly host, whenever we break the law through thoughtlessness, have mercy, Almighty, have mercy!' They pray that the 'adorable light of Savitri may illumine (or rouse) the spirit of the worshipper.' Now, they recognise a power from whom no secrets are hid. 'If a man stand, or walk, or hide; if he lie down or get up; what two people sitting together whisper, king Varuna knows it; he is there as the third' (i. p. 41). They long for a site 'where life is free, where the worlds are radiant, there make me immortal.' But the Vedas yet fancifully play with the phenomena of nature. The dawn is a young bride, gold-coloured, daughter of the sky, mother of the cows (the mornings), leading the white and lovely steed (the sun). Sometimes their thoughts on the mystery of the universe clothe themselves in solemn words, as in the hymn which Mr. Colebrooke has translated:—

'Nor aught nor nought existed; yon bright sky
Was not, nor heaven's loved works outstretched above.
What covered all? What sheltered? What concealed?
Was it the water's fathomless abyss?
There was not death,—yet there was nought immortal;
There was no confine between day and night,
The only One breathed breathless by itself,
Other than it there nothing since has been.
Darkness there was, and all at first was veiled
In gloom profound, an ocean without light.
. . . . . .
Then first came Love upon it.'

The Vedic Aryans certainly had neither temples nor idols. Even now, in India, images of the deified elements are unworshipped, and, except images of the sun, they are never made. The personification of the divine attributes of creation, preservation, and regeneration, Brahma, Vishnu, and Siva, which are now almost exclusively recognised,

there is no reason, from the invocations addressed to them in common with the air, water, the seasons, the planets, to suppose that they were ever worshipped under visible types. Indeed, ministration to idols in temples is held by ancient authorities infamous. Menu repeatedly classes the priest of a temple with persons unfit to be admitted to private sacrifices, or to be associated with on any occasion; and, even yet, the priests who attend upon the images in public are considered as of a scarcely reputable order by all Hindus of learning and respectability. The worship of images is declared to be an act of inferior merit even by later authorities. It is almost certain, therefore, that the practice of worshipping idols in temples was not the religion of the Vedas. The dwelling-house of the householder was his temple; if qualified, he was his own priest; but as they more extensively engaged in secular avocations, it became almost universally the practice to retain a family priest. This is still the custom. Instead, however, of being a Brahman of learning and character, he is very commonly illiterate, and not always respectable. The office has also undergone an important modification. The family priest was formerly also the guru or spiritual adviser of the family. The priest now rarely discharges that function; he merely conducts the domestic rites; and the guru, to whom extravagant deference, such as is due to deity alone, is paid, is very usually a member of some of the mendicant orders that have sprung up in comparatively modern times.

In 500 hymns translated by Professor Wilson, the following is the number of Sakta allotted to each, viz. Indra, 178; Agni, 147; Aswini, 28; Marut, 24; Varuna, 20; Mitra, 17; Ushas, 11; Vayu, 6; Surya or Savitri, 5; Rudra, 3; Vrihaspati, 2; Vishnu (none in the first Astaka), 2; and Saraswati, 1. In the Vedas, Rudra is the chief of the winds, collecting the clouds as a shepherd's dog does the sheep, and attending on his master Indra; but in the present day amongst the Hindus he is identified with Siva. In the Vedas, however, with the single exception of an epithet, 'Kapardi,' with braided hair, of doubtful significance, and applied also to another divinity, no other term applicable to Siva occurs, and there is not the slightest allusion to the form in which, for the last ten centuries at least, he seems to have been almost exclusively worshipped in India, that of the lingam, priapus, or phallus; neither is there the slightest hint of another important feature of later Hinduism, the trimurti or triune combination of Brahma, Vishnu, and Siva, as typified by the mystical syllable O'm (a-u-m).

Indra and all the gods are everywhere represented as unable to perform any great exploit without the inspiration of the soma juice. 'Sit down, Indra,' says Viswamitra, 'on the sacred grass, and when thou hast drunk the soma, then, Indra, go home' (iii. p. 84). 'Drink, Indra, the soma that is effused for thy exhilaration,' sings rishi Bharadwaja; 'stop the friendly steeds, let them loose; sitting in our society, respond to our hymns' (iii. p. 454). 'Who buys this, my Indra, with ten milch kine? when he shall have slain (your) foes, then let (the purchaser) give him again to me' (iii. p. 107). 'The purifying soma, like the sea rolling its waves, has poured forth songs, and hymns, and thought.' Such worship seems to explain the Greek story of Bacchus, and shows that it was not an invention merely to flatter Alexander.

Professor Max Muller says it we must have a general name for the earliest religion of the Vedic Indians, it would be neither monotheism nor polytheism, but only Henotheism, that is a belief in and worship of those single objects in which man first suspects the presence of the Invisible and the Infinite. This is unintelligible.

The Vedic, in common with other religions, was conservative, and the morality, the ethical conceptions, and social and political condition of the Aryans, moved in advance of the ideas in the earlier hymns. During the period embraced in the composition of the Vedas, Professor H. H. Wilson thinks (Rig Veda, i. 59, 65, i. xxiv.) 'it is inferable from some passages that human sacrifices were not unknown, although infrequent;' and the Satapatha Brahmana relates how men ceased to be the offered victims; first the horse, then other animals, and finally rice and barley and barley cakes, were successively substituted. The ninetieth hymn of the tenth book of the Rig Veda tells how all things were made out of the mangled limbs of Purusha (man). In the Purusha Sakta, a hymn of the Yajur Veda, the gods sacrifice Purusha. The Vedic conception of the creation of animal life is rude.

The Satapatha Brahmana discloses the wildest of cosmogonies,—how Purusha differentiated himself into husband and wife, and these into all forms of animal metamorphoses. There are two hymns in the Rig Veda describing the Aswa Medha rite, and which leave no doubt that in the early religion of the race, this sacrifice was had recourse to as a burnt-offering to the gods. It was, even then, however, falling into disuse, and was existing as a relic of an anti-Vedic period, imported from some foreign region, possibly from Scythia, where animal victims, and especially horses, were commonly sacrificed. And, in still later times, the Aswa Medha consisted in certain ceremonies ending in the liberation of the horse, as throughout nearly all India is still practised with a bull or cow, many of which are met with in every village, freed or let loose in the name of Siva or Vishnu or other Hindu god.

From the Vedas are immediately deduced the practical arts of chirurgery and medicine, music and dancing; archery, which comprises the whole art of war; and architecture, under which the system of mechanical arts is included. Next in order to these are the six Vedanga or bodies of learning, three of which belong to grammar, one relates to religious ceremonies, a fifth to the whole compass of mathematics, and the sixth to the explanation of obscure words or phrases in the Vedas. Subordinate to these Anga (though the reason of the arrangement is not obvious) are the series of sacred poems, the body of law, and the six philosophical Shastra.—*As. Res.* iii., xvii.; *Oriental Linguistic Studies; Darwinism in Morals; Sonnerat's Voyages; Wilson's Hindu Sects; Calcutta Review*, No. 109; *Elphinstone's India*, p. 226; *Professor Muller, Lectures; Saturday Review*, 24th Feb. 1883; *Weber*, p. 12; *Archdeacon Pratt in Beng. As. Soc. Journ.* No. 1 of 1862.

VEDA-MATRI, mother of the Vedas, the Gayatri.

VEDAN, also styled Vedar, Veddah, Bedan,

Veddar, Beder, and Weden, a wild forest race in Malabar and the S. of India, engaged in hunting. Those of the Malabar forests are predial slaves, who cut timber, and do not cultivate. The Beder of Zorapur in the doab of the Kistna and Bhima are settled but predatory. There are many of the Beder race throughout Mysore, in parts of the Ceded Districts. Tipu Sultan employed them in his armies, and they followed in the wake of the Mahratta armies. It is from their name that the term Pindara was formed. See Veddah; Vettuvan.

VEDANGA, from Veda and Anga, the name of six Sanskrit books explanatory of the Veda, viz. Siksha or pronunciation, by Panini; Chandas or metre, by Pingala; Vyakarma or grammar, by Panini; Nirukta, a glossarial comment; Jyotisha or astronomy; Kalpa or Vedic ceremonial.

VEDANTA is a school of philosophy or psychology founded on scattered texts of the Vedas, and thence termed the 'Anta' or end or substance. The voice of Hindu antiquity ascribes the origin of the Vedantic system to the sage Badarayana, otherwise named Veda-Vyasa. The manner of his birth is thus described in one of the works attributed to him,—

'Of birth and death,
A multiplicity of souls is to be inferred.'

The germs of this philosophy, and even its principal doctrines, are, however, contained in the Brahmanas of the Vedas; then it is seen in a more complete form in the Sutras of Vyasa; and lastly, this philosophy is recorded in the great commentaries which eminent scholars have written upon the original authorities.

The Vedanta, Sankhya, Vaiseshika, Nyaya, and Yoga philosophers all appeal to the Upanishads in support of their tenets. The philosophy of Vyasa considers all existing beings and things to be an evolution of the deity.

Sankaracharya was the most distinguished expounder of Vyasa's theory, which he held with some modifications. As it inculcates the existence of one sole essence, it is often called the Adwaita or non-dual system. Ramanuja was one of its ablest antagonists. It would be difficult to find two sets of opinions more absolutely irreconcilable than Vedic hymns and Vedantic philosophy. The Sutra (aphorisms) or Brahma Sutra, the chief authorities of the pantheistic Vedanta school, though much later than the rest, are still mnemonics, as also is the Vaiseshika or Atomic school of Kanada.

The Vedanta system is the second great division of the Mimansa school of Hindu philosophy. It is chiefly engaged in the investigation of Brahm or the supreme spirit, and the relation in which the universe, and especially the human soul, stands to it; and, in contradistinction from the Purva-Mimansa or the investigation (Mimansa) of the former (Purva) part of the Vedas, viz. the Sanhita, and especially the Brahmanas, which contain the Dharma or religious law, it is called the Uttara-Mimansa, or the investigation of the latter (Uttara) part of the Vedas, viz. Aranyaka and Upanishad, which treat of (the neuter) Brahm or the supreme spirit (not to be confounded with [the masculine] Brahma or the god of the mythological Trimurti). Sometimes the name given to it is Sarira-ka-Mimansa, or the investigation of the soul. In its method, the Vedanta differs from the Nyaya by endeavouring to explain the universe as a successive development from one ultimate source or principle; whereas the Nyaya, in both its divisions, treats of the object of human knowledge, of which the universe is composed, under different topics, unconcerned about their mutual relation of effect and cause; and from the Sankhya it is distinct, inasmuch as that system is based on the assumption of a duality of principles, whence the universe derives its origin.

VEDANTA-SUTRA or Brahma-Sutra, aphorisms of Badarayana on the Vedanta philosophy.

VEDDAH, a wild, semi-savage race, about 400 in number, residing in the interior of Ceylon. The forest Veddah dwell in hollow trees or caves, subsist on game, which they kill with rudely formed bow and arrows, wandering from jungle to jungle as the game becomes scarce. Their language is said to be unintelligible to all others. The village Veddah dwell in certain districts, hold but slight intercourse with the other inhabitants of the island, and do not intermarry with them. They can make themselves understood to the Singhalese. Their sole clothing is a strip of cloth which is fastened by a coir cord passed round their loins. Their hair, beards, and whiskers are never shorn or cleansed, but hang down in matted masses. The forest Veddah are skilful in snaring the wild elephant. The two tribes do not intermarry, as they mutually distrust each other. They have their own headmen, whom they elect and obey. They use bows and arrows, and clubs of iron and wood. They occupy a district about 90 miles long and 45 broad in the south-eastern side of Ceylon, lying between the sea and the base of the Badulla and Oovah Hills. They are said to be a remnant of the Yakko, the aborigines of Ceylon, who, 2000 years ago, after the conquest of the island by Wijayo and his followers, returned into the wilds. Their language is a dialect of Singhalese, free from Sanskrit or Pali, but the vocabulary is very limited, and they have recourse to gestures and signs. They cover their dead with leaves in the jungle. Veddah is the Sanskrit Vyadha, a hunter.—*Davy's Ceylon.*

VEDI. Sansk. An altar, a seat for an image.

VEDYAVAN, 'the man of secrets of knowledge,' is the term used by way of reproach to the Buddhist and Jain sects, having the import of magician. Their opponents believe them to be possessed of supernatural skill, and it is recorded of the celebrated Amara, author of the Cosa or dictionary called after him, that he miraculously 'made the full moon appear on Amavus,' the ides of the month, when the planet is invisible.

VEERANROOSTY. The jangam religious mendicants, and those of the Veeranroosty caste, blow the chank shells as trumpets.

VEGETABLE IVORY PALM (Phytelephas macrocarpa, *R. and P.*), of Central America and New Granada. It grows between the 9th degree of north and the 8th degree of south latitude, and the 70th and 79th of west longitude, and is found in narrow valleys and damp localities from the coast to 3000 feet above the sea. From the kernels or albumen of the fruit, turners fashion the knobs of walking-sticks, the reels of spindles, and little toys, which are whiter than animal ivory, and equally hard when dry, but soften when placed in water. The plant is supposed to belong to Endlicher's class Spadiciflora and Lindley's alliance Arales; but Martius regards it

as the type of a new natural order, and named it Phytelephanteæ, and is called the ivory palm.—*Seeman.*

VEGETABLE KINGDOM. This term is applied collectively to the various forms of plants, as the terms Animal Kingdom and Mineral Kingdom are applied to animals and minerals.

Extent.—Drs. Hooker and Thomson relate that all the main elements of the Indian flora exist in its surrounding countries, and that the families of plants peculiar to it are of very limited number. The Aurantiaceæ, Dipteraceæ, Balsamineæ, Ebenaceæ, Jasmineæ, and Cyrtandraceæ are the only orders which are largely developed in India, and sparingly elsewhere, and of these few contain one hundred Indian species. India contains representatives of every natural family on the globe, and it contains a more general and complete illustration of the genera of other parts of the world than any other country whatsoever. The Compositæ are, however, especially deficient, as also are the Gramineæ and Cyperaceæ in some regions, Leguminosæ, Labiatæ, and ferns in others; whilst Euphorbiaceæ and Scrophulariaceæ are universally present, and Orchideæ appear to form a larger proportion of the flora of India than of any equally extensive country. The total number of Indian species of plants were estimated by Drs. Hooker and Thomson at 12,000 to 15,000, but they are not generally diffused, and it is believed that no part of the whole area in India produces 2000 species of flowering plants in a radius of 10 miles. In the more humid jungles, many species may be gathered in an extensive area. In the dry arid tracts of Central India it would be difficult to collect 150 species in several miles. At 4000 to 5000 feet elevation in the Khassya, fifty species of Gramineæ and twenty to thirty species of Orchideæ have been collected in an 8 miles' walk. The mountains of India, when above 4000 or 5000 feet, present a temperate vegetation, which becomes wholly temperate at greater elevations, and passes into an alpine flora over a large extent of still loftier mountain country. In the humid parts of tropical India, as in the impenetrable green jungles of the equable and rainy Malay Peninsula, of Eastern Bengal, the west coast of the Madras Presidency, and of Ceylon, the flora contrast strongly with the drier parts of the intertropical zone, and still more so with the loosely timbered districts of Central India and of the base of the Western Himalaya. The drier tropical forests of India are much modified in luxuriance and extension by the winter cold in those extra-tropical latitudes over which they spread; hence many tropical genera and families, as most palms, Cycas, Dipterocarpeæ (except Vatica), Aurantiaceæ, Connaraceæ, Meliaceæ, Myrtaceæ, Rubiaceæ, Ebenaceæ, and many more, which are sensitive to cold, are comparatively local when found beyond the tropics; others which are indifferent to the cold of winter, as are many Leguminosæ (viz. Bauhinia, Acacia, Erythrina, Butea, Dalbergia, and Milletia), Bombax, Vatica, Nauclea, Combretaceæ, Verbenaceæ, Lagerstræmia, Grislea, Jasmineæ, and Bignonia Indica, are indifferent to the cold of winter, provided they experience a great summer heat; and they advance far beyond the tropics, and lend a more or less tropical aspect to the flora even of the base of the North-Western Himalaya in lat. 35° N. On the other hand, the perennially humid forests are uniformly characterized by the prevalence of ferns; and at elevations below 5000 to 7000 feet, by the immense number of epiphytal Orchideæ, Orontiaceæ, and Scitamineæ. They contain a far greater amount of species than the drier forests, and are further characterized by Zingiberaceæ, Xyrideæ, palms, Pandaneæ, Dracæna, Piper, Chloranthus, Urticaceæ (especially Artocarpeæ, and Fici), Araliaceæ, Apocyneæ, shrubby Rubiaceæ, Aurantiaceæ, Garciniaceæ, Anonaceæ, nutmegs, and Dipterocarpeæ. Besides species of the Gramineæ and Cyperaceæ, a vast number of annual plants vegetate only during the hot rainy season, and, neither exposed to drought or cold, the small Leguminosæ and Scrophularineæ occur amongst Sida, Corchorus, Nama, Blumea, and other Compositæ, some Labiatæ (as Leucas, Anisomeles, etc.), Amarantaceæ, Acanthaceæ, Convolvulaceæ, Ludwigia, Jussieua, etc. And these tropical annuals and perennial-rooted plants with annual stems, are not confined to the plains, but ascend the loftier mountain valleys as far as the well-marked rainy season extends, and only disappear where the accession of heat and humidity is not sufficient in amount, or regular enough in period, to stimulate their vegetative organs. Among the most remarkable of these extra-tropical examples of tropical genera are species of Bignonia, Osbeckia, Argostemma, Plectranthus, various Cyrtandraceæ, Scitaceæ, Araceæ, Commelynaceæ, and a few epiphytical Orchideæ. And during the cold months only, in the extra-tropical regions of India, numerous genera and species of annual plants of the north temperate zone flower when the tropical plants are torpid.

Besides the chenna, wheat, barley, and more rarely oats, with various kinds of pulse, which form the winter crops of the Gangetic plain of Central India, of Berar, of the Central Dekhan, of Mysore, and Coimbatore, there are of wild plants, Ranunculus sceleratus and R. muricatus, Capsella bursa-pastoris, Selene conica, Alsine media, Arenaria serpyllifolia, Euphorbia heleoscopia, Medicago lupulina and M. denticulata, Lathyrus aphaca, Gnaphalea, Xanthium, Veronica agrestis and V. anagallis, Heliotropium Europeum, various Polygona, Juncus bufonius, Butomus umbellatus, Alisma plantago, and very many Cyperaceæ, Gramineæ, and such aquatics as Myriophyllum, Potamogeton natans and P. crispus, Vallisneria, Zannichellia, Ranunculus aquatilis, Lemna, and many others.

In the regions at the base of the mountains in the perennially humid provinces of India, from the atmosphere being more loaded with moisture, the climate is more equable than that of the adjacent plains, and a warm temperate flora, unknown to the plains, commences at elevations of 2000 to 3000 feet, and prevails over the purely tropical vegetation which appears amongst it in scattered trees and shrubs. Amongst other orders may be mentioned Magnoliaceæ, Ternstræmiaceæ, sub-tropical Rosaceæ (as Prunus, Photinia, etc.), Kadsura, Sphærostema, Rhododendron, Vaccinium, Ilex, Styrax, Symplocos, Olea, Sapotaceæ, Lauraceæ, Podocarpus, Pinus longifolia, with many mountain forms of truly tropical families, as palms, Pandanus, Musa, Clusiaceæ, vines, Vernonia, and hosts of others.

In the *Himalaya*, the truly temperate vegetation supersedes the sub-tropical above 4000 to 6000 feet; and the elevation at which this change takes place corresponds roughly with that at which the winter is marked by an annual fall of snow. This phenomenon varies extremely with the latitude, longitude, humidity, and many local circumstances. In Ceylon and the Madras Peninsula, where mountains attain 9000 feet, and where considerable tracts are elevated above 6000 to 8000 feet, snow has never been known to fall. On the Khassya mountain, which attains 7000 feet, and where a great extent of surface is above 5000 feet, snow seems to be unknown. In Sikkim, snow annually falls at about 6000 feet elevation; in Nepal, at 5000 feet; in Kamaon and Garhwal, at 4000; and in the extreme West Himalaya lower still. In the mountains of Ceylon, on the Neilgherries, and on the Khassya Hills, the temperate forms of plants are more numerous than upon the Himalaya. Violent winds sweep over the broad, grassy, undulating tops of the Khassya Hills, and hundreds of species common to the Sikkim Himalaya and to the Khassya ascend higher in the warm forest-clad and sheltered Himalayan valleys at 5000 to 7000 feet in Sikkim than they do in the Khassya Hills. In the Himalaya, the genera Rhododendron, Monotropa, Pedicularis, Corydalis, Nepeta, Carex, Spiræa, Primula, Cerasus, Lonicera, Viburnum, and Saussurea, attain their maximum of development over all other parts of the world. Ephedra ranges from the plains of the Panjab up to 16,000 feet in the N.W. Himalaya; the genus Marlea ascends from 3000 to 8000 feet in Sikkim, and in the Western Panjab, at scarce 4000 feet, accompanies Celtis and a species of ash; sub-tropical Myrsine extend into Afghanistan. Juniperus excelsa, found as low as 5000 feet in Afghanistan, ascends to 15,000 feet in Tibet. Populus Euphratica, a Cynanchum, Chloris barbata, Cyperus aristatus, are tropical and sub-tropical plants which ascend to 11,000 feet in Ladakh, and Peganum harmala attains to 9000 feet. The alpine or arctic flora, on the alpine region of the Himalaya, commences above the limit of trees throughout a great part of the Himalaya, and hardly reaches its extreme limit at 18,500 feet (3½ miles) of elevation. It has a comparative paucity of cryptogamic plants, is poor in the luxuriant mosses of tall growth and succulent habit, and, though fully representing the flora of the polar regions, it partakes in its characteristic genera of the temperate flora, and contains so many types foreign to the flora of the polar regions (as Gentiana, Ephedra, Valerianeæ, Corydalis), and some which are even rare in Siberia, that it must rather be considered as a continuation of the alpine flora of Europe than a representation of that of the arctic zone.

The bulk of the flora of the perennially humid regions of India, as of the whole Malayan Peninsula, the Upper Assam valley, the Khassya mountains, the forests at the base of the Himalaya from the Brahmaputra to Nepal, of the Malabar coast, and of Ceylon, are of one type, which includes a very large proportion of the Indian genera.

The floras of the frontier provinces of India are identical with those of the countries which surround them, and there is even a decided affinity between the floras of areas separated by oceans, deserts, or mountain chains, which present many natural characters in common, for which neither migration nor climate will account.

Of the flora of Australia, Pittosporum and Scævola are found all over India and Africa; and of two species of Stylidium, one extends to Midnapur in the Gangetic delta, and one in the Malay Peninsula, along with several genera of Myrtaceæ (Leptospermum, Bœkia, Metrosideros), and the genus Tristania, which advances to Moulmein, in lat. 17° N. Also the Casuarina grows wild up to Ramree, Helicia in the Malay Peninsula, and the Lagenophora of N. Zealand and Australia has a representative in the Khassya and Ceylon. Many species of tropical plants of the Neilgherry and Khassya Hills, of Ceylon, and of the Himalaya, are identical with Javanese mountain plants. Gaultheria nummularia is found in the N.W. Himalaya, through the whole range into the Khassya, and also on the Javanese mountains 3000 miles distant. The Sedgwickia cerasifolia of Griffith (Liquidamber altingia of Blume), also the curious Cardiopteris lobata, several oaks and chesnuts, Antidesma, a willow, and Myrica, are common to the Khassya and Java; and Marlea is spread into China, throughout the Himalaya, and to the mountains south of Kashmir.

Amongst the Indian flora are many temperate genera and species which are common to N. America west of the Rocky Mountains, besides many tropical species that are also Malayan and West Polynesian.

The *Chinese* type is abundant in the temperate regions of the Himalaya, is fully developed in the Khassya, in Sikkim, and Butan, and extends westward to Garhwal and Kamaon. Chinese and Japanese species of Aucuba, Helvingia, Stachyurus, Enkianthus, Abelia, Skimmia, Bucklandia, Adamia, Benthamia, Corylopsis; and of those common to India and China are Microptelea parvifolia, a species of elm, Hamamelis Chinensis, Nymphæa pygmæa, and Vaccinium bracteatum, all of the Khassya; Quercus serrata of China, Nepal, Sikkim, and the Khassya; while species of Illicium occur in the Khassya, Thea in Assam, and Magnolia in Sikkim and Khassya, with species of Camellia, Deutzia, Hydrangea, Viburnum, several Corneæ and Houttuynia. Schizandreæ are peculiarly characteristic of the Chinese flora, but also extend into Java. Lardizabaleæ belong to the Himalaya, Japan, and China. The fern Bowringia is found in Hong-Kong and in the Khassya; and the genera Daphne, Bucklandia, Enkianthus, Henslowia, Scepa, Antidesma, Benthamia, Goughia, Myrica, and others are both Chinese and Indian. Euryale ferox is abundant in China, in the delta of the Ganges, and in Kashmir; and Nepenthes phyllamphora is a native of the Khassya, of Macao, and of the Louisiade Archipelago.

The *Siberian* type of plants is very fully represented in the upper and alpine regions of the Himalaya, and is most confined to the drier parts of the chain, but may be observed even in the most humid regions of the Himalaya, and occasionally on the mountains of tropical India. It approaches in many respects to the south European vegetation, but is characterized by the predominance of Fumariaceæ, Potentillæ, Leguminosæ (especially Hedysarum and Astragaleæ), of Umbelliferæ, Lonicera, Artemisia, Pedicularis,

and Boragineæ, and by the rarity or total absence of the European Cistaceæ, Rosa, Rubus, Trifolium, Erica, ferns, and other cryptogams. Artemisia and Astragalus of the Siberian type are abundant throughout Tibet and the interior Himalaya, are represented by a few species in the plains of the Panjab and on the Khassya mountains. Spiræa Kamtschatika, Chamædrifolia, and Sorbifolia, and Paris polyphylla are alike Siberian and Himalayan forms, while Corydalis Siberica and Nymphæa pumila are identical in Siberia and on the Khassya Hills.

European.—222 British species have been ascertained to extend into India, and a multitude of mountain plants, many of them the most conspicuous in Europe, range from the coasts of the Levant and the Black Sea to the Himalaya. This is the more remarkable, as the Himalaya range is, in idea rather than really, connected with the mountains south of the Caspian, or with the Caucasian Alps, or those of Asia Minor, for the mountain mass of Asia sinks to the westward of Afghanistan, rising again only in isolated peaks. The Corylus colurna (C. lacera, *Wall.*) ranges from the Levant and the Black Sea to the Himalaya. Quercus ilex, Ulmus campestris, Celtis Australis and orientalis, extend from Spain to the N.W. Himalaya; but the walnut, ivy, juniper, yew extend from Europe through the Himalaya, across China, through Mexico, and throughout N. America. The yew, the juniper, Aquilegia vulgaris, Calla palustris, etc., are common to most parts of Europe, N. Asia, the Himalaya, and N. America. The Mediterranean flora, Celtis, Quercus ilex, Olea Europea, Myrtus communis, etc., are also Himalayan plants. The European plants, however, rapidly disappear to the east of Kamaon, but there is a blending of the European flora on the east of the Himalayan chain; as to the eastwards, there is a mixture of Chinese and Malayan forms with that of the Himalaya.

Many *North African* or *Arabian* forms, such as Peganum, Harmala, Fagonia cretica, Balanites Ægyptiaca, Acacia Arabica, Alhaji, Grangea, Calotropis, Salvadora Persica, extend through the drier parts of India; and others, Cleome, Balsamodendron, Astragalus hamatus, Cucumis colocynthis, Berthelotia, Anticharis Arabica, etc., have a less extensive range, and there is a striking resemblance between the vegetation of tropical Africa and tropical Asia.

Zones.—In descending from Darjeeling, the zones of vegetation are well marked. At a little below 7000 feet, or between 6000 and 7000, by (1) the oak, chesnut, and magnolia. (2) Immediately below 6500, the tree-fern appears (Alsophila gigantea, *Wall.*), a widely-distributed plant, common to the Himalaya from Nepal eastward to the Malay Peninsula, Java, and Ceylon. Of this Dr. Hooker saw but one species in the mountains; a very similar, or possibly distinct species, grows at the foot of the outer range. (3) Palms, a species of Calamus, the renoul of the Lepchas. The fruit of all the Calami are eaten by the Lepchas, and the stems of larger species applied to various economic purposes. This, though not a very large species, climbs lofty trees, and extends some 40 yards through the forest; 6500 feet is the upper limit of palms in the Sikkim Himalaya, and one species alone attains so great an elevation. Four other Calami range between 1000 and 6000 feet on the outer hills, some of which are found 40 miles distant from the plains. Among the other palms of Sikkim is the Simong, a species of Caryota, which is rare, and ascends to nearly 6000 feet. Firing the forest is so easy in the drier months of the year, that a good deal of cultivation is met with on the spurs at and below 5000 feet, the level most affected by the Lepchas, Limbu, and Sikkim Bhoteas. The mountain slopes are so steep, that these spurs, or little shelves, are the only sites for habitations between the very rare flats on the river banks and the mountain ridges, above 6000 feet, beyond which elevation cultivation is rarely if ever carried by the natives of Sikkim. The varieties of grain are different, but as many as 8 or 10 kinds are grown without irrigation by the Lepchas, and the produce is described as very good (80-fold). Much of this success is due to the great dampness of the climate; were it not for this, the culture of the grain would probably be abandoned by the Lepchas, who never remain for more than three seasons on one spot. A large bamboo (Pao, LEPCHA) is the prevailing plant near the base of these valleys; it attains a height of 40 to 60 feet, and the culms average in thickness the human thigh; it is unarmed, deep-green or purplish, and used for large water-vessels. Besides this there are nearly a dozen kinds of bamboo known to the Lepchas, and all have been pointed out. A timber of the Himalaya, universally adopted for ploughshares and other purposes requiring a hard wood, is the Singbrang-kun of the Lepchas, which ascends 4000 feet on the mountains. In very dry soils it is replaced by sal (Vatica robusta), and more rarely by the Pinus longifolia. Sterculiæ, of two species, are common, as Pæderia fœtida, which, as well as many Cucurbitaceæ, peppers, Gnetum, Porana, a few Convolvulaceæ, and many Asclepioideæ, Hoya, etc., climb high. A troublesome dipterous insect swarms on the banks of the streams; it is very small, floating like a speck before the eye. The bite of this (the Peepsa) leaves a small spot of extravasated blood under the cuticle, very irritating if not opened. A white-flowered rue, Ruta albiflora, is sometimes cultivated, and very common; truly wild at elevations of 3000 to 7000 feet; it is commonly used for all diseases of fowls, mixed with their food. Two species of bamboo, Payong and Praong of the Lepchas, here replace the Pao of the foot of the hills. The former flower abundantly, the culms, 20 feet high, being wholly a diffuse panicle of inflorescence. The Praong bears a round head of flowers at the apex of the leafy branches.

Timbers.—A thousand feet above Punkabari in the Outer Himalaya, the prevalent timber is gigantic, and scaled by climbing Leguminosæ, as the Bauhinia and Robinia, which sometimes sheath the trunks or span the forest with huge cables joining tree to tree. Their trunks are also clothed with parasitical orchids, and still more beautifully with Pothos (Scindapsus), peppers, Gnetum, vines, convolvulus, and Bignoniæ. The beauty of the drapery of the Pothos leaves is pre-eminent, whether for the graceful folds the foliage assumes, or for the liveliness of its colour.

From one steppe, the ascent to Punkabari is sudden and steep, and accompanied with a change in soil and vegetation. The mica-slate and clay-

slate protrude everywhere, the former full of garnets. A giant forest replaces the stunted and bushy timber of the Terai proper; of which the Duabanga and species of Terminalia form the prevailing trees, with Cedrela and the Gordonia Wallichii. Smaller timber and shrubs are innumerable; a succulent character pervades the bushes and herbs, occasioned by the prevalence of Urticaceæ. Large bamboos rather crest the hills than court the deeper shade; and of the latter there is abundance, for the torrents cut a straight, deep, and steep course down the hill flanks; the gulleys they traverse are choked with vegetation, and bridged by fallen trees, whose trunks are richly clothed with Dendrobium Pierardi and other epiphytical orchids, with pendulous Lycopodia, and many ferns, Hoya, Scitamineæ, and similar types of the hottest and dampest climates. The forest is truly magnificent along the steep mountain sides. The proportion of deciduous trees is considerable, partly probably due to the abundance of the Dillenia, Cassia, and Sterculia, whose copious fruit is all the more conspicuous from the leafless condition of the plant. The white or lilac blossoms of the convolvulus, like Thunbergia and other Acanthaceæ, were the predominant features of the shrubby vegetation, and very handsome. All around, the hills rise steeply 5000 or 6000 feet, clothed in a dense deep-green dripping forest. Torrents rush down the slopes, their position indicated by the dipping of the forest into their beds, or the occasional cloud of spray rising above some more boisterous part of their course.

Trade.—British India is largely independent of all other countries for its supplies from the vegetable kingdom.

'The Indian nut alone
Is clothing, meat, and trencher, drink and can,
Boat, cable, sail, and needle, all in one.'

But its imports are also considerable; in 1882-83, as under:—

Imports.		Exports.	
Canes, rattans,	Rs. 2,46,476	Caoutchouc,	Rs. 12,59,165
Caoutchouc,	2,11,010	Coffee,	1,39,22,040
Coffee,	7,52,563	Coir,	14,20,884
Coir,	86,139	Cotton,	16,05,00,268
Corks,	2,35,797	Cotton goods,	2,57,20,616
Cotton, raw,	9,80,199	Drugs,	12,51,206
Cotton goods,	24,81,00,625	Dyes and colouring materials,	4,16,14,273
Drugs,	39,16,367	Fruits and vegetables,	2,80,222
Dyes, etc.,	20,66,395	Rice,	8,47,58,404
Flax, raw, etc.,	14,00,923	Wheat,	6,07,13,170
Fruits and vegetables,	21,14,346	Gram, jowari, bajra, etc.,	31,73,426
Gram and pulse,	8,75,476	Gums and resins,	30,66,805
Gums and resins,	11,78,231	Hemp,	4,33,501
Hemp,	2,10,083	Jute, raw,	5,84,69,259
Hops,	4,20,829	Jute manufactures,	1,48,78,304
Jute manufactures,	3,97,938	Oils,	38,18,275
Opium,	3,692	Oil-cake,	3,91,252
Paper,	33,04,784	Opium,	11,48,13,764
Seeds,	3,26,212	Perfumery,	69,279
Spices, betel-nuts, cloves, nutmegs, pepper,	51,08,537	Seeds,	7,20,25,931
Sugar of all kinds,	1,08,69,610	Spices,	37,69,109
Tea,	19,30,515	Sugar,	67,86,420
Tobacco,	8,36,087	Tea,	3,69,95,085
Wood,	9,93,844	Tobacco,	9,89,358
		Wood, timber,	67,10,265

—*Dr. Hooker; Hooker and Thomson; A. R. Wallace.*

VEGETABLE MARROW.

Squash gourd, . . ENG. | Suppara roomro, . HIND.

This very delicate vegetable of the gourd species is the Cucurbita ovifera, *Linn.* The crooked-necked variety, when about six inches long, is well flavoured, but soon gets hard and stringy. The pear-shaped is the best of any, but must be dressed when young. Propagation only by seed, and the plants should never be removed, but remain where sown, only thinning the weakly ones. The soil should be a rich loam, the same as for cucumbers. Train the plant on sticks. It is often necessary to fertilize the female blossoms, by approaching the anthers of the male flower when charged with pollen.—*Riddell.*

VEGETABLES OF INDIA.

Abelmoschus esculentus.
Achyranthes aspera.
Ærua lanata.
Æschynomene aspera.
Agati grandiflora.
Allium ascalonicum.
A. porrum.
A. sativum.
Alternanthera sessilis.
Amarantus atropurpureus.
A. campestris.
A. frumentaceus.
A. oleraceus.
A. polygamus.
A. spinosus.
A. tenuifolia.
A. tristis.
Amorphophallus campanulatus.
Andropogon esculentum.
Artocarpus integrifolia.
Asparagus acerosus.
A. officinalis.
Asystasia Coromandeliana.
Atriplex heteranthera.
Bambusa, *sp.*
Basella alba.
B. purpurea.
Batatas edulis.
Bauhinia albida.
Benincasa cerifera.
Bergera Kœnigii.
Beta vulgaris.
Boerhaavia procumbens.
Brassica oleracea.
B. rapa.
Bryonia coccinia.
Byttneria herbacea.
Caladium esculentum.
Canavalia ensiformis.
C. gladiata.
C. grossum.
C. obtusifolia.
Capparis brevispina.
C. Decaisnæi.
Capsella bursa-pastoris.
Capsicum frutescens.
C. minimum.
C. purpureum.
Caralluma adscendens.
Carica papaya.
Chenopodium album.
Cleome pentaphylla.
Cocos nucifera.
Commelina communis.
Convolvulus batatas.
Coriandrum sativum.
Cucumis usitata.
Cucurbita citrullus.
C. maxima.
C. ovifera.
Cyamopsis psoraloides.
Cynodon dactylon.
Cyperus, *sp.*
Daucus carota.
Desmanthus natans.
Dillenia scabra.
D. speciosa.
Dioscorea aculeata.
D. anguina.
D. atropurpurea.
D. glabra.
D. purpurea.
D. rubella.
Dolichos catjang.
D. ensiformis.
D. lablab.
D. pilosus.
Emblica officinalis.
Eruca sativa.
Erythroxylon areolatum.
Euphorbia pilulifera.
Ficus racemosa.
Fœniculum vulgare.
Fungus, *sp.*
Gisekia pharnaceoides.
Glinus trianthemoides.
Grewia affinis
G. rigida.
G. salicifolia.
Hibiscus sabdariffa.
H. Suratensis.
Hoya viridiflora.
Ipomœa reniformis.
I. reptans.
I. separia.
Lablab vulgaris.
Lactuca sativa.
Lagenaria pipo.
L. vulgaris.
Lepidum sativum.
Leptadenia reticulata.
Leucas aspera.
Luffa angula.
L. fœtida.
L. pentandra.
Lycopersicum esculentum.
Mangifera Indica.
Momordica charantia.
M. charantia, *var.*
M. dioecia.
M. muricata.
Morinda umbellata.
Moringa pterygosperma.
Musa sapientum.
Nasturtium, *sp.*
Nelumbium speciosum.
Nymphæa pubescens.
Ocimum villosum.
Oxalis corniculatus.
Phaseolus trilobus.
Pisonia morindifolia.
Pisum arvense.
P. sativum.
Plectranthus aromaticus.
Portulacca oleracea.
P. quadrifida.
Premna integrifolia.
P. serratifolia.
Psophocarpus tetragonolobus.
Raphanus sativus.
Rivea fragrans.
Rothia trifoliata.
Rumex vesicaria.
Salsola Indica.
Sinapis, *sp.*
Solanum incertum.

S. lycopersicum.	Suæda Indica.
S. melongena.	Tamarindus Indica.
S. torvum.	Trianthema obcordata.
S. tuberosum.	Tribulus terrestris.
Sonchus oleraceus.	Trichosanthes anguina.
Spatheum Chinense.	T. cucumerina.
Spinacia oleracea.	Vitis quadrangularis.
Spondias mangifera.	Webera tetrandra.
Stellaria media.	Zizyphus jujuba.

The Chinese raise a great abundance of vegetables, and their range in the vegetable kingdom is extended beyond that of the people of Europe, perhaps only equalled by the races occupying Burma and Cambodia. A process of preserving vegetables by desiccating them, has been successful. While the moisture is completely abstracted, the other matters are left perfectly untouched and unaffected. Apart from the power of being able to put upon the table at any season, and at a moment's notice, any vegetable that may be desired, it affects largely the utilization of much waste fruit and vegetables, and affords a new means of keeping our armies and navies supplied with a very necessary portion of their commissariat.

The following list shows the time needed for the ordinary plants to come to maturity :—

	Days.		Days.
Mustard,	10 to 12	Onions,	60 to 90
Cress,	,,	Maize,	90 to 105
French bean,	45	Spinage,	40
Double bean,	50	Lagenaria vulgaris,	60 to 90
Scarlet runner,	50 to 75	Cyamopsis psoraloides,	150 to 180
Amarantus tristis,	45 to 60	Sorrel,	42 to 60
A. oleraceus,	,,	Parpoo kiri (Portulaca ?)	42 to 56
A. campestris,	,,	Fenugreek,	42
Egg plant,	90	Soi kiri, TAM. ?	42
Momordica charantia,	60 to 90	Sakotti kiri, TAM. ?	42 to 60
Luffa acutangula,	90 to 105	Turnips,	90
Roselle,	150	Cucumber,	60
Snake gourd,	90 to 135	Water melon,	90 to 120
Radish,	42	Musk melon,	,,
Lettuce,	35 to 42		

VEGETABLE TALLOW is obtained from the China tallow tree or Stillingia sebifera. It has flowered and seeded at Amritsar and Lahore.—*Powell, Handbook*, i. p. 423.

VEGETABLE WAX is obtainable at Shanghai in China, in the northern parts of which and in Japan the plant is indigenous. From its high melting point and other physical characteristics, it has of late attracted a good deal of attention. It is admirably suited as a material for the manufacture of candles.

In India, in the middle of the 19th century, Mr. Loarer manufactured from castor-oil a solid oil, to which he gave this name, competing successfully, as regards cost, with the cheapest oil or fat now employed in England. It was thought that his process of converting the oil into wax, by enabling the ryot to store the solid substance far more easily than the seed or fluid oil, would lead to the oil being expressed from the seed whilst clear and free from impurities.—*Simmonds' Commercial Products*, p. 540. See Wax.

VEHAR LAKE, in Salsette Island, about 15 miles from Bombay, is an artificial reservoir formed to provide the town of Bombay with drinking water. The quantity of water supplied by the reservoir is about 8,000,000 gallons a day, or between 12 and 13 gallons a head for the population of Bombay.—*Imp. Gaz.*

VEIL. In the Koran, women are enjoined to be concealed. The Muhammadan women of Western Asia, Northern Africa, and Turkey in Europe appear abroad with veils (Burqa) so constructed as to conceal the lower part of the face. Their sisters in British India are almost all confined to their homes; the few of humble rank who appear abroad have no covering on their faces. The veil of the Hindu women is nothing more than the garment brought over the face, which is always very carefully used by the higher classes of women when they appear in the street.

VELAIYA TESIKAR was born at Kanjipuram, but studied under the head of the Mantam of Sindupunturai in Tinnevelly. He wrote the following works:—Nallur Puranam, Virasingkatanar Puranam, Ishdalingka Kaittala Malai, Namasivaya Lilai, Kirushna Saritiraparisata Lilai, and Mayil-ttiraddai Malai. The Kalatti Puranam, commenced by his brothers Siva Pirakasa and Karumai Pirakasa, was also completed by him. He died at Perumatur.

VELLALA or Vellazhar, Vellaler or Vellan. Amongst the Tamil races who have adopted Brahmanism, the Vellala, alike in numbers and in social rank, take the chief place. They are very largely agricultural, and in the northern part of the Tamil country take the honorific appellation of Mudali or first man, which seems to be from the same root as the word Mandal, the village headman of Bengal. In the southern districts they adopt that of Pillai. Their number in the Madras Presidency in 1881 was 1,770,669. The designation Vellala means charitable, and they claim to be Vaisya of the Bhu-vansa or agricultural section. They believe that they came from the north. They are shorter and darker than Brahmans, darker even than the Teling people; but they have, in general, well-formed countenances and graceful forms, though amongst them also occur the decidedly African lip and nose and forehead of which Mr. Logan makes mention. Under the native Tamil government this race alone was allowed to hold land in Tonda Mandalam. The Vellaler are, to the present day, said to be of foreign origin. They are called the Ganga Kula, and are said to have come to the country on the invitation of Adondai of Tanjore, after overthrowing the Kurumbar, and to supply the deficient population of Tuluva-desam (modern Canara). A broken tribe of this name are said to wander about in the jungles of the Puducottah estate. They are scantily clothed, and subsist on the produce of the jungles. Srivigundam town in the Tinnevelly district, in lat. 8° 38′ 20″ N., and long. 77° 57′ 20″ E., has a fort occupied by Natha Kothi Vellalers, a caste of Sudras who have peculiar customs. There is also a fine temple. The Vellala of Ceylon are chiefly in the low country.

VELLAR or Vasishthanadi river, in the Peninsula, formed by the streams of the Tinunda and Kalrayan Hills in Salem district. It flows through the Attur pass into the plain of South Arcot, and across the latter district into the sea at Porto Novo. Total length about 135 miles. Since 1870 the Vellar or Pelandorai anicut, in the South Arcot district, has been built across the Vellar river for the irrigation of the fifty villages in the Chellumbrum taluk.

VELLORE, a town and military cantonment in the Carnatic, on the right bank of the Palar, in lat. 12° 55′ 17″ N., and long. 79° 10′ 17″ E., 70 miles W. from Madras, and 695 feet above

the sea. It is known to the people as Rai Ellur or Stony Ellore, to distinguish it from Ellore on the sea-coast, which they name Uppu Ellur or Salt Ellore. It has a strongly-built fortress, which is overlooked by hills in the vicinity. It seems to have been built about the beginning of the 16th century by the Vijayanagar rulers, but in 1646 it fell to the four confederate Muhammadan kings, and in 1677 it and Ginji were captured by Sivaji. During the war of 1782 it was relieved by Sir Eyre Coote in the face of Hyder's army. After the fall of Seringapatam, the family of Tipu, consisting of 12 sons and 8 daughters, were located in Vellore. On the 10th July 1806, the sepoys of the garrison, incited by Tipu's descendants, mutinied and massacred most of the officers and European soldiers, but were subdued by Colonel Gillespie with a party of the 19th Dragoons from Arcot, 18 miles distant, and a remnant of the Europeans saved, after which all the family of Tipu were removed to Bengal. The Palar river runs about half a mile from the fort. Besides its imposing and picturesque fortress, which contains many interesting buildings, Vellore possesses a handsome Vishnuvite temple with some good carving.

VELMA, Aihna, Yelmi, or Velama, in the Northern Teling country, are a dominant agricultural tribe with military proclivities, who claim to be Rajputs, and of descent from the rajas of Warangal. They take the title of Rayadu. They are soldiers and agriculturists, brave and high spirited, and on points of honour will sacrifice themselves. In 1881 they numbered 348,063.

VELVET INSECT, the Bir-buti of the Hindus, about the size of the nail of the little finger. It appears in the rains, is of a bright red colour, and has a soft unctuous feel. An oil is extracted from the unctuous bodies, which is used as a vesicating agent and counter-irritant.

VEMANA, a Telugu author of a large collection of popular aphorisms and moral subjects, whom Dr. Caldwell supposes lived at the beginning of the 18th century.

VENCATES, a name of the idol of Balaji at Triputty, near Madras. The idol is also called Venkatramma Govinda, also Venkatachella, and Venkat Eswara. The god of Tripatty was brought into notice by Ramanuja Charya as an incarnation of Vishnu; and since then the names have been favourites amongst the Teling Hindus.

VENDIDAD, the book containing the religious code of the Parsee Zoroastrians. It has undergone three various processes of composition, of the Avesta, Zend, and Pa-zend. The Avesta is of very ancient date, and is the groundwork of the existing Vendidad, though all of it almost is post-Zertushtrian. In the course of time, several explanations and interpretations of the laws have been made, which acquired as much force as the original, and were incorporated with it. This is the Zend, and the incorporation of further explanations was styled the Pa-zend. Avesta means direct higher knowledge, divine revelation. Zend means the explanation of this, and Pa-zend the supplements to the Zend, or further explanation of the Zend doctrine. All the three steps exist in the present Zendavesta, or more properly Avesta-Zend. In recent years, the researches of Chevalier Bunsen and Professors H. H. Wilson and Max Muller and Mr. Wheeler seem to prove that much of the earlier history of two branches of the Aryan race are embodied in the Vendidad of the ancient Persians and present Parsees, and in the Vedas of the Hindus. According to Dr. Haug, the opening to the Vendidad, or Code of the Fire-worshippers of Iran, dates from the most ancient times, and its contents are the reminiscences of the passage of the old Aryans into India on the south and into Persia on the south-west. According to Ch. Bunsen, the Aryan emigration from Sogd to Bactria took place prior to B.C. 5000, consequently before the time of Menes; the immigrations into the Indus country about B.C. 4000; and the opening to the Vendidad describes the succession of the foundation of the fourteen kingdoms, the last and most southern of which was the land of the Five Rivers (the Panjab). Also, according to that writer, in the same way that political tradition represents that of the western aborigines, so does the Aryan one represent that of the eastern tribes in the primeval land. The vast climatic change which took place in the northern countries is attributed in the Bible to the action of water. In the other, the sudden freezing up of rivers is the cause assigned. Both may have resulted from the same cause, the upheaving of the land by volcanic action, elevating portions and depressing into basins such as the Caspian Sea. Ten months of winter is now the climate of Western Tibet, Pamir, and Belur at the present day, and corresponds with that of the Altai country, and the district east of the Kouen Lun, the paradise of the Chinese. The country at the sources of the Oxus and Jaxartes, therefore, is supposed to be the most eastern and most northern point whence the Aryans came. Wherever the Indians may have fixed the dwelling-places of their northern ancestors, the Uttarukuru, we cannot, he considers, venture to place the primeval seats of the Aryans anywhere but on the slopes of the Belur Tagh, in the high land of Pamir, between lat. 37° and 40° N., and long. 86° and 90° E. On this western slope of the Belur Tagh and the Mustagh (the Tian Shan or Celestial Mountains of the Chinese), the Haroberezaiti (Alborâsh) is likewise to be looked for, which is invoked in the Zendavesta as the principal mountain and the primeval source of the waters. At the present day, the old indigenous inhabitants of that district, and generally those of Kashgar, Yarkand, Khoten, Turfan, and the adjacent highlands, are Tajak, who speak Persian, and who are all agriculturists. The Turkoman either came after them and settled at a later period, or else they are aborigines whom the Aryans found there. On this point Chevalier Bunsen likewise remarks that the opening of the sacred code of the Vendidad as certainly contains an historical tradition of the Aryans, as does the 14th chapter of Genesis an historical account of the oldest recorded war between Mesopotamia and Canaan. The Fargard is divided into two great parts, one comprising the immigration from the eastern and north-eastern primeval countries to Bactria, in consequence of a natural catastrophe and climatic changes, the other the subsequent extension of the Aryan dominions through Eastern Central Asia, which terminated in the Panjab. The following passage contains

a genuine description of the climate of the primeval land of the Aryans, Iran proper: —'There Ingromaniyus (Ahriman), the deadly, created a mighty serpent, and snow, the work of Deva; ten months of winter are there, two of summer.' The following passage, which is omitted in the Huzuresh or Pehlavi translation, and which Lassen considers an interpolation, is irreconcilable with the above:—'The warm weather lasts seven months, and winter five.' The fathers of the Aryans, therefore, originally inhabited Iran proper, the land of pleasantness, and they left it only in consequence of a convulsion of nature, by which a great alteration in the climate was caused. They did not follow the course of the Oxus, or they would have come in the first instance to Bactria, and not to Sogd. Their course, therefore, was more northerly. Its present climate is precisely what the record describes it to have been when the changes produced by the above commotion took place. It has only two months of warm weather. In the course of the Aryans after their expulsion from the primeval country between Sogdiana and the Sutlej, they formed, by the conquest of fourteen countries, as many kingdoms in the whole of the eastern part of Central Asia and India proper, in the country of the Indus and its confluents. In the intervening countries they passed amongst the Turanians (Scythians and Turkomans), and there is evidence that the inhabitants whom they found in India were likewise Turanians. The main direction of these travellers was southerly, and on the southern bank of the Caspian is a group the nucleus of the Aryan Media. Under the heading Aryan will be seen Professor Muller's list of the successive settlements of the race.—*Wheeler's History of India; Professor Muller's Lectures; Calcutta Review*, 1859; *Edinburgh Review; Bunsen's Egypt*, iii. iv.

VENERIDÆ, a family of molluscs of the class Conchifera, of the following genera:—

Venus, rec. 176 sp.; fossil, 260 sp.
? Volupia rugosa, fossil.
Saxidomus Nuttali, rec. 8 sp.
Cytheræa, syn. Meretrix, 80 sp. Dione, rec. 113 sp.; fossil, 80 sp.
Meroe, syn. Cuneus, Sunetta, rec. 11 sp.
Trigona, rec. 28 sp.; also fossil.
Sub-genus. Grateloupia, fossil, 4 sp.
Artemis, syn. Dosinia, rec. 85 sp.; fossil, 8 sp.
Sub-genera. Cyclina, rec. 10 sp.; fossil, 1 sp.
Clementia, rec. 3 sp.
Lucinopsis, syn. Dosinia, Mysia, Cyclina, rec. 10 sp.; fossil, 3 sp.
Tapes, syn, Paphia, Pullastra, rec. 78 sp.; also 6 fossil.
Venerupis, syn. Gastrana, rec. 19 sp.; also fossil.
Petricola, syn. Rupellaria, Choristodon, Naranio, rec. 30 sp.; fossil, 12 sp.
Glaucomya, syn. Glauconome, rec. 12 sp.

VENGI, the ancient name of Southern Telingana, the capital of which was situated 5 miles N.N.W. from Ellore on the road to Nagpur. Two modern villages have been built on the rivers, and called Pedda Vegi and Chinna Vegi. Buddhist princes reigned at Dara Nagara near Amaravati and at Vengipuram in Vengi-desam.

VENICE, capital of Venetia, now an important section of the kingdom of Italy, is built on 72 islands on piles in the midst of a salt lagoon or shallow lake. It is divided into two unequal parts by the Canalazzo, or Grand Canal, the course of which through the city follows the form of an inverted S; is 300 feet wide, crossed near the middle of its course by the Ponte di Rialto, a splendid marble structure of one spacious arch. In the midst of the labyrinth of canals and streets there are several large piazzas, nearly all of which are adorned with fine churches or palaces. The principal of these is the Piazza di San Marco, a large oblong area 562 feet by 232, surrounded by elegant buildings, and containing at its eastern extremity the metropolitan church of San Marco, a singular but brilliant combination of the Gothic and the oriental style of architecture. Before the discovery of the Cape of Good Hope by the Portuguese in 1486, Venice was one of the most powerful commercial and maritime states in Europe. The people of Venice had opened a trade route to India down the river Euphrates. Venetian merchants sailed from Venice to Tripoli, thence their goods were carried in caravans to Aleppo, which was a famous mart, whose reputation even Shakespeare did not fail to notice. From Aleppo the caravans made their way to Bir, on the banks of the Euphrates. Here the merchandise was transferred to boats, and conveyed down the river to a point near Baghdad on the Tigris. Baghdad being reached, the merchandise was then transferred to boats on the Tigris, and carried down to Bussora and the island of Ormuz in the Persian Gulf. In those days Ormuz was the greatest emporium in the east. There all the velvets, cloths, and manufactures of the west were exchanged for the spices, drugs, and precious stones of the east. The wealth acquired by the merchants of Venice in their trade with the east excited the envy of the whole of Europe. The Portuguese especially spared no expense in their endeavours to discover a new route to India, and, after nearly a century of the most indomitable exertions, they in the latter part of the 15th century found their way to Calicut by way of the Cape. The Indian trade of those days was revolutionized. In a very short time the trade routes by the Red Sea and the Euphrates were completely forgotten, and the cheapest and shortest route between Europe and India was the high sea; but, after making use of the sea route for 500 years, the route followed by the ships of king Solomon and Hiram, king of Tyre, is again found to be the best, and the great ships of the Peninsular Company make Venice their final port.

Venice was founded about A.D. 452 by those who fled from before Attila the Hun. So early as A.D. 525, it was importing silks from the east; and from A.D. 802 dates her great trade in eastern spices, drugs, and silks. Both Genoa and Venice co-operated in the Crusades, and both suffered by the capture of Constantinople by the Ottoman Turks, A.D. 1453; and Venice yet further in consequence of the annexation of Syria and Egypt to the Ottoman empire by Selim, A.D. 1516-17. When Venice, A.D. 1475-87, acquired possession of Cyprus, Famagusta became the emporium of its overland trade with the east, both through Egypt and Syria, and continued to be the first commercial city of the Levant, until taken by the Turks, A.D. 1570-71.

VENI SANHARA, the binding of the braid, a drama by Bhatta Narayana. The plot is taken from the Mahabharata, and relates how Draupadi was dragged by the hair of her head by Duh-

sasana into the hall of the Kaurava; she left it unbraided till the death of the Kaurava.—*Dowson.*

VENKATAGIRI, town and ancient zamindari estate in Nellore district, Madras. The town (lat. 13° 57′ 7″ N., and long. 79° 37′ 20″ E.) contained, in 1871, 7524 inhabitants. The estate pays to Government a pesh-kash or permanent revenue of £40,400.—*Imp. Gaz.*

VENKULLY, a town near Quilon. Its cliffs, about midway between Quilon and Trevandrum, are immediately on the sea-beach, and rise almost perpendicularly to 80 and 180 feet, capped by 25 to 40 feet of laterite. Immediately below the laterite are variegated sands 40 to 60 feet in thickness; and below all, generally at the base of the small cliffs, are the lignite and carbonaceous deposits. Where the cliffs rise to 130 or 160 feet, two, three, or more deposits of lignite occur. At Quilon, layers of lignite shell lie immediately above the shell limestone.

VENTILAGO ACALYCULATA, a native of the northern parts of India.

VENTILAGO MADERASPATANA. *Gært.*
Funis viminalis, *Rumph.*

Ruktupita, . . Beng. | Surati pette-tige, . Tel.
Erra chiratali, . . Tel. | Suralatige, Surugudu, ,,

Grows throughout the E. Indies and Archipelago. The fishermen of Amboyna use the long climbing stems as substitutes for ropes. It is a very large climbing shrub, a native of forests and other uncultivated places amongst the mountains, flowering during the cold season.—*Roxb.*

VENUS, supposed to be from Vana, Sansk., the fair one, but the etymology of the word is also given from Banu or Benu of Eastern Asia; Hebrew, Benoth; Syrian, Benos; and the Greek and Latin forming Venus. Venus is the analogue of Bhawani. Venus in Sanskrit is also called Asphujit (Αφροδιτη); Maghabhava, son of Magha; Shodasansa, having 16 rays; and Sweta, the white.

In Assyria and Babylonia, Baaltis was the analogue of Venus, an active and independent power; Istar was the goddess of love and war, the patroness of the moon; and the planet Venus, the equal, and sometimes the rival of the male deities.

In the temple of Venus at Cyprus, the presiding divinity was placed in the porch, as in a kind of shrine or enclosure. The second book of Kings (xvii. 30), when recounting the idolatrous practices of the people transported by the Assyrian monarch into the Samaritan cities, observes that the 'men of Babylon made Succoth-Benoth,' which is literally rendered by Parkhurst, the tabernacle of the daughters, or the young women. Calmet, however, supposes that we are to understand Benoth as denoting a female idol, the Benos of the Syrians, and the Venus of the Greeks and Latins. The heathen strangers there made booths or tents in honour of the deity whom they worshipped, and representations of pavilions consecrated to Venus may be seen on many ancient medals. These tents of Venus, the Succoth-Benoth of the Babylonians, the tabernacle of Moloch, and the silver shrines of Diana, mutually illustrate each other. The procession of idols was of frequent occurrence in antiquity. The gods were carried in chariots, niches, or miniature temples, analogous to the shrines of the Ephesian idols. The image being in a small temple of wood, gilt, was carried out the day before to another building. Among the Egyptians, the shrine of Jupiter was annually transported over the river (Nile) into Libya, and after some days returned, as if the god himself were come from Ethiopia. The sacred procession of idols was also common among the Gauls, who, according to Sulpitius Severus, carried their gods into the fields, protected from the profanation of vulgar eyes by a white veil. Examples of the portable shrine are common in Russia, and in all the countries of the Greek Church. The ιερα of the Greeks, says Dr. Clarke, as well as the tabernacles of the eastern nations, were sometimes not only portable, but they were so small, that the κιστοφορα used for enclosing them could also be carried. The idols of the Hindus are generally kept in the interior of temples, but during festivals the idol is placed in a car with or without wheels, or in a palanquin, and is carried out dressed up with all the jewellery of the temple, preceded by the deva-dasa and the Brahmans. When outside the temple, the worshippers burn camphor and present cocoanuts as offerings, and the dancing girls sing and dance before the god, and the Brahmans chant passages from the Puranas. If at night, fireworks are also exhibited. Some of the cars or rath are of great size, with large wheels. The village gods at stated periods are carried round the village boundaries. The Venus of the Hindus is Rati.—*Milner's Seven Churches of Asia*, p. 132.

VENUS FLOWER BASKET, a siliceous sponge of the Philippines, is the Euplectella aspergillum. Euplectella cucumer, *Owen*, occurs in the Comoro Islands, in E. Africa; Japan has the glass-rope sponge, Hyalonema Sieboldii; Rossella Philippinensis is a sponge of Cebu Island, Philippines; lace-work sponge of Cebu is the Meyerina claviformis; Geodia Japonica is the great vase-shaped sponge of S. Japan.

VERAJENDERPET, situated on the road leading to Cannanore from Mercara, 20 miles from the latter place. There is a cross-road from Mysore, which joins the road to Cannanore a few miles below Verajenderpet, and along this road passes all the direct traffic between Mysore and the coast.

VERAPOLI, a town in Travancore State, Madras, in lat. 10° 4′ N., and long. 76° 19′ 20″ E., 9 miles north-east of Cochin; the seat of a Carmelite mission and of the Vicar-Apostolic.—*Imp. Gaz.*

VERATRUM NIGRUM. Li-lu, Chin., black hellebore, takes its name from the dark colour of its roots. The flowers are mostly white, dark-purple, and green. It is cultivated in a rich garden soil by seed, or dividing the roots, which contain powerful medicinal properties.—*Riddell.*

VERBASCUM THAPSUS. *Linn.*

V. Indicum, *Wall.* | Vular, . . . Kangra.
Ghidar, Phasruk, Chenab. | Spin kharnar, Trans-Ind.

This plant grows in Europe, in the Caucasus, Siberia, and in the Himalaya, up to 11,000 feet, a white-flowered variety occasionally occurring at the higher elevations. It is eaten by camels, goats, etc. In Bissahir the root is given as medicine.—*Roxb.; Voigt.*

VERBENACEÆ, *Juss.*, a useful order of plants in the East Indies, comprising the vervain tribe, consist of 19 genera, 153 species,—40 Clerodendron, 1 Ægiphyla, 14 Callicarpa, 36 Premna, 26 Vitex, 8 Congea, 1 Symphorema, 8 Gmelina, 2 Tectona, 1 Phryma, 1 Streptium, 3 Verbena, 1 Stachytarpheta, 2 Zapania, 5 Lantana, 1 Asaphes,

1 Glossocarya, 1 Hymenopyramis, 1 Avicennia. Of the genus Verbena, several exotics are cultivated; these are pretty little flowering plants which require shelter and good drainage. Species of the genera Clerodendron, Callicarpa, Premna, Vitex, and Gmelina furnish useful products.—*Jaffrey.*

VERBENA OFFICINALIS, common vervain, grows throughout Europe, America, Persia, and the Himalaya. It is the holy herb of Dioscorides, who ascribed great powers to it, especially in incantations. In most countries where it grows it seems to have been invested with extraordinary powers. It entered into the composition of various charms and love philters, and has even now a popular reputation for predisposing persons favourably towards those who administer a dose to them. This plant is described as astringent, febrifuge, etc., but has fallen into just neglect. Still among the ancient Greeks and Gauls it held the highest place in popular estimation; it was used to purify the altars, and formed the crowns of heralds and ambassadors. The Druids gathered it with the same marks of veneration as the misletoe, next to which it was reverred. Formerly employed extensively as a medicine, it was also the base of numerous philters or love potions, and hence derived its name of Veneris vena, or source of love. It is well known for its strong aromatic lemon scent. It grows from cuttings or layers, and no doubt would also from seed, as it blossoms freely.

VERBENA TRIPHYLLA. *Leher.*

Aloysia citriodora.	Lemon-scented verbena.
Pilu-bhungara, . DUKH.	Lemon-scented vervain.

This plant is a native of Chili. An infusion when cold is administered as a cooling drink in fevers, slight catarrhs, etc.

VERBESINA PROSTRATA. Bhangra, HIND. A small creeping plant growing in wet soil. A white variety is much used in medicine. Alchemists believe there is a black-flowered species, and eagerly search for it.—*Eng. Cyc.; Riddell; O'Sh.*

VERDDHAMANA, Mahavira, the 24th Tirthankara of the Jains; one of the four eternal Jinas, born in Behar.—*As. Res.* pp. 282, 292.

VERDIGRIS. ENG. Subacetate of copper.

Zungar, ... ARAB.	Sanam, . . . MALAY.
Tung-ts'ing, . . CHIN.	Sennang, . . . MALEAL.
Tung-luh, . . . ,,	Jar, ... RUS.
Vert-de-gris, . . . FR.	Pittalata, . . . SANSK.
Grunspau, . . . GER.	Cardenillo, ... SP.
Chungal, . . GUJ., HIND.	Verdete, Verdegris, . ,,
Verderame, ... IT.	Vungalap-patchei, TAM.
Jingal, ... KASH.	Zenghalie-patse, . TEL.

Subacetate of copper, of a beautiful bluish-green colour, extensively used by painters and in dyeing.—*Ainslie; Rohde, MSS.; Faulkner; M'C.*

VERDITER, a blue pigment, made by decomposing a solution of sulphate of copper with the addition of chalk.

VERJUICE.

Verjus, ... FR.	Agresto, ... IT.
Agrest, ... GER.	Agraz, ... SP.

A kind of harsh vinegar, made of the expressed juice of the wild apple or crab. The term is also applied to the expressed juice of unripe grapes.—*Faulkner.*

VERMICELLI. ENG., FR., IT.

Fen-sze, Yin-sze, . CHIN.	Save, ... HIND.
Lock-soy, . . . ,,	Tagliolini, ... IT.
Meelneepen, Proppen, DUT.	Alterias, ... SP.
Nudeln, ... GER.	Seme, Saywian, TAM., TEL.

Vermicelli or vermichelly is an Italian composition of various edible articles, reduced to a paste, and formed into slender worm-like pieces, from whence its name. The simian of India is made from wheaten flour. The Chinese make coarse kinds of vermicelli from rice flour, and they are used by both natives and foreigners in making soups. The Yin-sze or silver threads are vermicelli made from wheaten dough, drawn out on a frame and dried in the sun.

Lock-soy also is a kind of vermicelli prepared from rice at Cochin-China, and thence exported in considerable quantity to Japan and China, where it is much esteemed. It is transparent, and gives a consistence to soup. Chinese lock-soy is opaque, and less esteemed.

The natives of India usually prepare Saywian vermicelli between the hands instead of using a press. Saywian-ka-takhta, a board for making Saywian on. Vermicelli is also prepared by being run through sieve holes into hot water.—*Morrison's Comp. Des.; M'Cull.*

VERMILION.

Yin-chu, ... CHIN.	Sulphide of mercury, ENG.
Taze-fen-shwang, . ,,	Red sulphuret of ,, ,,
Vermilioen, . . . DUT.	Cinnabar, . ENG., GER.

This substance is mentioned in Jeremiah xxii. 14, and Ezekiel xxiii. 14. In China this beautiful pigment is made by mixing together two catties of red sulphur and one catty of mercury, and subliming the mixture. The crystalline sublimate on the cover of the alembic is called cinnabar, whilst that on the sides is the vermilion. These bright red or dark orange acicular crystals are carefully powdered, levigated, decanted, and dried upon tiles, and then sifted, sorted, and packed in glazed black paper in quantities of about an ounce. The more patiently and thoroughly the vermilion is ground, the more beautiful is the red colour. The article is regularly exported to England, in boxes of some 50 catties, selling at an advance of some 25 per cent. upon the current cost of mercury. Foh-kien vermilion is the best, but it is made in other Chinese towns. It is often adulterated with minium or oxide of lead, and with sesquioxide of iron. Large quantities are used for colouring candles, and paper for stamping and writing purposes, and in the making of varnishes.—*Smith, Mat. Med.*

VERNAG, in Kashmir, is the source of the river Jhelum. It is a sheet of water, the reflections of which are from azure to turquoise and emerald.

VERNICIA MONTANA, *Lour.* (Elæococca montana), a tree of Cochin-China and China, yields a clear yellowish-coloured fatty oil.

VERNONIA ANTHELMINTICA. *Willd.*

Serratula anthelmintica, *R.*	Baccharoides anth. *Mœnch*
Conyza anthel., *Linn.*	Ascaridia Indica, *Juss.*
Som raj, ... BENG.	Kanana ziraka, . SANSK.
Kali ziri, ... DUKH.	Sauni naya, . . . SINGH.
Purple fleabane, . ENG.	Kaattu siragum, . TAM.
Bakchi, ... HIND.	Adivi jilakarra, . TEL.

The small and dark-coloured seeds are extremely bitter. They are considered as powerfully anthelmintic, and are also an ingredient of a compound powder which is occasionally prescribed in cases of snake-bite. An infusion of them is given on the Malabar coast for coughs and in flatulencies. A rather hard fibre is obtained from this plant.—*Roxb.; Voigt; Ains.; M. E. J. R.*

VERNONIA CINEREA. *Less.*

Serratula cinerea, *Rh.*	C. purpurea, *Linn.*
Conyza cinerea, *Linn.*	C. mollis, *Willd.*
Chata koksun, . . BENG.	Sira-shengalnir, . TAM.
Kak-jangi, . . . HIND.	Nedsitu, ... ,,
Saha-devi, . . . ,,	Gariti kamma, . . TEL.
Puvanku runal, MALEAL.	

This annual plant grows in the Peninsula and in Bengal. Its seeds are used in medicine, and said to be a powerful anthelmintic. All the parts of the plant are very bitter, used as a diaphoretic in fever, and its ground seeds are used to destroy vermin in the hair. Dr. Wight gives V. conyzoides, multiflora, Neilgherrensis, pectiniformis, salviæfolia, and Wightiana, to which Voigt adds V. aspera, multiflora, vagans, and volkameriæfolia.—*Roxb.; Voigt; Waring; Ainslie; Powell, Handbook; Useful Plants; O'Sh.; Birdwood.*

VERNONIA VOLKAMERIÆFOLIA. *D.C.* This good-sized tree occurs on the South Travancore ghats, at about 3000 to 4000 feet elevation (Attraymallay Ghat), but has not been found on the Neilgherries, or anywhere north of the Palghat gap; but if it be the volkameriæfolia of D.C. (and Colonel Beddome's specimens were named at Kew), it also occurs in Nepal. Its timber is soft and worthless. It is the only compositæ known to Colonel Beddome in the Madras Presidency which grows to a tree, except Monosis; but Vernonia Javanica, a considerable tree, occurs in Ceylon, and is probably also found in S. Tinnevelly or Travancore.—*Beddome, Fl. Sylv.*

VERSOVA, a basaltic island, one of the numerous islands which fringe the Bombay Archipelago. It is in lat. 19° 7′ 40″ N., and long. 72° 47′ E., and now desolate; about 7 miles north of Mehim, north of Bombay.—*Findlay.*

VESADÆ or Bisadæ or Besadæ are alluded to in the tract of Palladius de moribus Brachmanorum, written about A.D. 400, and the same name is applied by Ptolemy to a similar race inhabiting Northern India.

VESPA MAGNIFICA. *Sm.* This enormous hornet, nearly two inches long, was brought to Dr. Hooker at Choongtam in Sikkim alive, in a cleft stick, lolling out its great thorn-like sting, from which drops of a milky poison distilled. Its sting is said to produce fatal fevers in men and cattle, which may very well be the case, judging from that of a smaller kind, which left great pain in his hand for two days, while a feeling of numbness remained in the arm for several weeks. It is called Vok by the Lepcha race, the common name for any bee. Its larvæ are said to be greedily eaten, as are those of various allied insects.—*Hooker, Him. Jour.* ii. p. 26.

VESPERTILIONIDÆ, the bat family of mammals, which may be thus shown:

Sub-Fam. Scotophilinæ.

Scotophilus serotinus, *Jerdon.*
Vespertilio noctula, *Geoff.* | V. serotinus, *Schr.*
Europe, Himalaya, Tyne Range beyond Mussoori.
S. Leisleri, *Jerdon.*
Vespertilio dasycarpus, *Blyth*, hairy-armed bat, Tyne Range, Himalaya.
S. pachyomas, *Jerdon*, the thick-muzzled bat of India.
S. Coromandelianus, *Jerd.* (Kerivoula Sykesii, *Gray, Ell.*), the Coromandel bat of all India.
S. lobatus, *Jerd.* (Vespertilio abramus, *Temm.*), the lobe-eared bat of India.
S. fuliginosus, *Jerd.* (Nyctiecjus stratus, *Blyth*), the smoky bat of Nepal.
S. fulvidus, *Ell.*, Tenasserim.
S. pumiloides, China.
Noctulinia noctula, *Gray.*
Vespertilio lasiopterus, *Sch.* | V. altivolans, *White.*
V. labiata, *Hodg., Blyth.*
The noctule bat of England, Nepal; flies high.
Nycticejus Heathii, *Horsf., Bl.*, large yellow bat, Southern and Central India.
N. luteus, *Blyth* (N. flaveolus, *Horsf.*), Bengal yellow bat, all India, Assam, Burma.
N. Temminckii, *Jerd.*
Vespertilio belangeri, *Geoff.* | V. noctulinus, *Is. Geoff.*
Common yellow bat of India, Burma, Malayana.
N. castaneus, *Gr., Bly.*, chesnut bat of Bengal, Burma, Malayana.
N. stratus, *Blyth* (Scotophilus fuliginosus, *Bly.*), sombre bat of Darjeeling.
N. canus, *Blyth* (Scotophilus Maderaspatanus, *Gray*), hoary bat of all India.
N. ornatus, *Blyth*, harlequin bat of Darjeeling.
N. nivicolus, *Hod., Hors.*, near the snows of Sikkim.

Sub-Fam. Vespertilioninæ.

Lasiurus Pearsoni, *Horsf., Bl.* (Noctulinia lasiura, *Hodgson*), the hairy-winged bat of Darjeeling.
Murina suillus, *Jerd.*
N. lasiura, *Hodg.* | L. Pearsoni, *Bl.*
The pig bat of Darjeeling, Malayana.
M. formosa, *Jerd.*, the beautiful bat.
Vespertilio, *Hodg.* | Nycticejus Tickelli, *Blyth.*
Kerivoula, *Gray.* | N. Isabellinus, *Horsf.*
Central India, Nepal, Sikkim, Darjeeling.
Kerivoula picta, *Jerd.* (Vespertilio kerivoula, *Bodd.*), all India, Burma, Malayana.
K. pallida, *Blyth*, the pale-painted bat of Chybassa.
K. papillosa, *Jerd.*, the papillose bat of Ceylon, Calcutta, Java, Sumatra.
K. tenuis? *Tomes* (Vespertilio tenuis), Java, Sumatra.
K. Hardwickii, *Tomes* (Vespertilio Hardwickii), Java, Sumatra.
Vespertilio caliginosus, *Tomes*, mustachoed bat of India.

VESPIDÆ, a family of insects belonging to the order Hymenoptera. It comprises the species of the genus Vespa of Linnæus, of which the common wasp and the hornet are familiar examples. They were formed into a family by Latreille, under the name of Diploptera, afterwards changed into Diplopteryga by Kirby. They form the third and last division of the first sub-section (Prædones) of the second section (Aculeata) of Hymenoptera in Westwood's revision of Latreille's arrangement. When at rest they fold their wings throughout their entire length, whence their distinctive appellation. The wings of all the insects of the family have a similar neuration, their eyes are lunate, and there are glands at the extremity of the labrum. The four wings have one marginal and three perfect submarginal cells, with an incomplete terminal submarginal cell. Among the wasps are insects of the most dissimilar habits; some solitary, others living in societies, some phytophagous, others carnivorous. Such as are social rival the bees in the complicated instincts which regulate their societies. Among the wasps, structure, and not economy, is the real source of essential character. Each species of the solitary wasps comprises males and females only, and constitutes the family Eumenidæ. The genera Eumenes and Odynerus belong to it. The habits of the solitary wasps are interesting. Odynerus murarius (Vespa muraria) of Linnæus makes a hole several inches deep in the sand, or in the sides of walls, constructing a tube of earthy paste, at first straight, and then curved at its entrance. In this burrow it constructs its cell, and deposits in the cavity of the interior cell from eight to

twelve little green caterpillars, arranging them spirally in layers above each other. In the midst of these it deposits its eggs, then closes the mouth of the hole with the materials of the tube, which it had used as a sort of scaffold. The larvæ when hatched feed upon the caterpillars. The social wasps constitute the restricted family of Vespidæ of Westwood, the Polistides of Saint Fargeau. They live in numerous societies, consisting of males, females, and neuters, which are temporary, being dissolved at the approach of winter. The mandibles of the Vespidæ proper are not longer than broad, and broadly and obliquely truncated at their extremities.—*Eng. Cyc.*

VESYA. TEL. The third of the three great sections of the Hindus, their third cast or caste. There are four castes,—the Brahman, the Chetria or Kshatriya, the Vaisya, and the Sudra. The pure Vaisya occupies himself in commerce and other peaceful avocations.

VETAKIRI MUDALIAR was born in 1795. He established a press in Madras, and published editions of several classical works. Besides four ethical poems, Manuniti Satakam, Manuvikkiyana Patakam, Niti Sintamani, and Sanmarkkassaram, he prepared the addendum to the Jaffna Tamil Dictionary, and composed the additions to the 11th part of the Nikandu, printed at Manepy in 1843.

VETAL, the demon-god of the non-Aryan races. Outside almost every Hindu village in the Dekhan is a circle of large stones, sacred to Vetal. Vetala, a goblin that haunts cemeteries and animates dead bodies. Vetala-Deva, king of the demons.—*As. Res.* ix. p. 120.

VETALA-PANCHAVINSATI. SANSK. The twenty-five stories of the Vetala, by Jambhaladatta. It is the Hindi Baital-Pachisi, and has been translated into all the languages of India.

VETUSTA or Betusta, the Jhelum or Hydaspes, one of the sacred rivers invoked by a Brahman when saying his daily prayers.

VETUVAR, a forest and hunter tribe in Malabar and Konkan. They are predial slaves. A subdivision of the Vetuvar is employed in agriculture, also as boatmen and salt-makers.

VI. SANSK. A privative term, as Viragi, without desire; the a privative of Latin.

VIBHISHANA, brother of Ravana, who sided with Rama, and was therefore seated on his brother's throne.

VIBHUTI, also Vibudi. TAM. The sacred ashes of burnt cow-dung with which the Hindu Saiva sect besmear their forehead, and sometimes their whole body. See Tripundra.

VIBURNUM, a genus of plants belonging to the natural order Loniceraceæ. The species consist of shrubs with opposite petiolate leaves and corymbose flowers. Drs. Wight and Voigt name 12 species. V. cotinifolium, *D. Don*, and V. fœtens, plants of Kaghan and the Himalaya.—*Stewart.*

VIBURNUM OPULUS. *Lindley.*

Siuoh-k'iu, . . . CHIN. | Snowball, ... ENG.
Guelder rose, . . ENG.

This ornamental shrub, called snowball, grows also in China, where its leaves are used as a purgative.

VIBURNUM PUNCTATUM, *Ham. in Don. Prod.* p. 142, the Viburnum acuminatum of Wallich, W. A. Prod. p. 386, is a middle-sized or small tree, very common in many of the sub-alpine and alpine jungles from no great elevation up to 6000 feet; it is also found on the Himalayas and in Java.—*Beddome, Fl. Sylv.*

VIBURNUM STELLIONUM. *Rich.*

Aklu, Guch, Kuch, KAGH. | Thalin . . of KOTGHAR.

V. cotinifolium, V. fœtens, and V. stellionum form the underwood of forests in the N.W. Himalayan valleys. The wood is used chiefly for fuel. The berries of both V. fœtens and V. cotinifolium are edible. — *Mr. Powell; Cleghorn; Stewart.*

VICHITRA-VIRYA, son of Santanu, raja of Hastinapur, married Amba and Ambalika, daughters of the raja of Kasi, but he died without children. His widows were taken by his half-brother Vyasa, and were the mothers of Dhritarashtra and Pandu. Vyasa also begat Vidura out of a slave girl of Ambika. Dhritarashtra, Pandu, and Vidura were thus half-brothers.

Arrian gives the story thus: 'He (Hercules) had a daughter when he was advanced in years, and, being unable to find a husband worthy of her, he married her himself, that he might supply the throne of India with monarchs. Her name was Pandea, and he caused the whole province in which she was born to receive its name from her.' This, says Tod, is the very legend contained in the Purana of Vyasa (who was Heri-cul-es, or chief of the race of Heri), and his spiritual daughter Pandea, from whom sprang the grand race of the Pandu, and from whom Dehli and its dependencies were designated the Pandu sovereignty. Her issue ruled for 31 generations in direct descent, or from B.C. 1120 to 610, when the military minister, connected by blood, was chosen by the chiefs, who rebelled against the last Pandu king, represented as 'neglectful of all the cares of government,' and whose deposition and death introduced a new dynasty. Two other dynasties succeeded in like manner by the usurpation of these military ministers, until Vikramaditya, when the Pandu sovereignty and era of Yudishtra were both overturned. According to a writer in the Westminster Review, Vichitra-virya died childless, and Vyasa begot two sons by his two widows, and a third son by a slave girl, whom the third widow, Ambika, substituted for herself. This practice of a relative raising children for a deceased childless relative is sanctioned by Menu, who says: 'On failure of issue by the husband, the desired offspring may be procreated either by his brother or some other near relative, called Sapinda, on the wife, who had been duly authorized.' Pandu also, when lamenting his childlessness, says to Pritha, 'In distress men desire a son from the oldest brother-in-law.' Menu, regarding the choice of a husband, enjoins parents to select a handsome son-in-law; and adds, 'Three years let a damsel wait, though she be marriageable, but after that term let her choose for herself a husband of equal rank.' Another mode of ancient Hindu marriage was the Swayamvara or self-choice, where a girl chose her own husband. In the Mahabharata, the cases of Pandu with Pritha, Yudishtra with Devika, Sahadeva with Vijaya, Sivi and Devaki, Nala and Damayanti, Draupadi and Arjuna, are mentioned. Menu describes eight modes of marriage, viz. Brahma, Deva, Arsha, Prajapatya, Asura, Gandharva, Rakshasa, and the eighth and worst, Paisacha; the first six for a

Brahman, the four last for a warrior, and the same four, the Rakshasa excepted, for the third and fourth class.—*West. Rev.*, April 1868; *Prinsep by Thomas; Tod's Rajasthan*, i. p. 31.

VICIA, a genus of plants belonging to the natural order Fabaceæ. The species are usually climbing herbs with abruptly pinnate leaves, with many pairs of leaflets. About fifteen species are known.—*Riddell; Hogg.*

VICIA FABA. *Linn.* Faba vulgaris, *Mænch.*

Ful, ... EGYPT.	Faba græca, . . . LAT.
Garden bean, . . ENG.	Faba major, . . . ,,
Bakla-kabli, . . . HIND.	Faba minor, . . . ,,

This plant, a native of the environs of the Caspian Sea, is cultivated in India. Its flowers are large white, striped and dotted with black.

VICIA SATIVA, common vetch.

Luh-tau, ... CHIN. | Akra, Ankra, . HIND.

Grows in fields under spring crops, creeping round the stalks of the young plants and checking their growth.

VICTORIA CROSS, a decoration established by the Queen-Empress Victoria for conspicuous gallantry in the field.

VICTORIA REGIA, one of the Nymphæaceæ, a beautiful water-lily of S. America, Guiana, and Brazil, is now to be found in many parts of India. It was first successfully raised in the garden at Calcutta from seed sent by Dr. Wallich from England on the 9th of September 1851. It was received and sown in the garden on the 6th of November following, where it lay in a dormant state until the 23d of April 1853. On the 13th of May, same year, the seedling had made a healthy growth, and was transferred on that date to the mound prepared for it.

In Guiana and Brazil, the leaves have been observed in deep water to measure 12 feet across; the expanded flowers are about one foot in diameter. The seeds are eaten by the Indians.

It was discovered by the botanist Hænke in 1801, was noticed at Corrientes by Bonpland in 1820, and again by M. D'Orbigny in 1827. Its seeds, mais del agua, are roasted like maize. Sir R. H. Schomburgh found it on his ascent of the Berbice river in British Guiana in 1837; but it was not successfully introduced into cultivation until 1849, after various fruitless attempts.

VIDDHAGAHA MADHAVA, a seven-act drama by Rupa. Viddha-salabhanjika, the Statue, a comedy of domestic intrigue by Raja Sekhara, probably earlier than the 10th century.

VID'HARBHA, an ancient territory, always identified with Berar, but the limits of the province included the adjoining district of Beder, in which the name of Vid'harbha or Biderbha is traceable. Local traditions also assert that the ancient capital, still called Beder, is the same as Vid'harbha.—*Hind. Th.* ii. p. 11.

VIDVAN-MODA TARANGINI, or Fountain of Pleasure, a philosophical work by Rama Deva.

VIDYA. SANSK. Learning. The Hindus have eighteen Vidya of true knowledge, or sciences, and some branches of knowledge, falsely so called. The first four are the Vedas, which are entitled in one compound word, Rigyajush-samat'harva, or, in separate words, Rig, Yajur, Sama, and At'harvana. The Rig Veda consists of five sections, the Yajur Veda of eighty-six, the Sama Veda of a thousand, and the At'harvana Veda of nine, with eleven hundred shac'ha or branches, in various divisions and subdivisions. The Vedas, in truth, are infinite, but were reduced by Vyasa to this number and order. The principal part of them is that which explains the duties of man in a methodical arrangement; and in the fourth is a system of divine ordinances.

From these are deduced the four Upa Veda (Upa Veda, Upanga, Upuran, are terms which infer a work deduced, respectively, from its principal; up, like to sub, implies inferiority), namely, Ayush, Gandharva, Dhanush, and Sthapatya. The first of these, the Ayur Veda, was delivered to mankind by Brahma, Indra, Dhanwantari, and five other deities, and comprises the theory of medicine, with the practical methods of curing diseases. The second, the Gandharva, treats of music, was invented and explained by Bharata; it is chiefly useful in raising the mind by devotion to the felicity of the divine nature. Dhanush, the third Upa Veda, composed by Viswamitra, was on the fabrication and use of arms and implements handled in war by the tribe of Kshatriya. Viswakarma revealed the fourth, in various treatises on sixty-four mechanical arts, for the improvement of such as exercise them. Six Anga, or bodi of learning, are also derived from the same source; their subjects chiefly are—1. of the pronunciation of vocal sounds; 2. detail of religious acts and ceremonies; 3. grammar; 4. prosody; 5. astronomy; 6. on the signification of difficult words and phrases in the Vedas. Lastly, there are four Upanga, called Purana, Nyaya, Mimansa, and Dharmashastra. Eighteen Purana (that of Brahma and the rest) were composed by Vyasa for the instruction and entertainment of mankind in general. Nyaya is a collection of treatises, in two parts, on metaphysics, logic, philosophy, etc. Mimansa is somewhat similar, divided into two parts; the latter, called Uttara, abounding in questions on the divine nature and other sublime speculations, was composed by Vyasa in four chapters and sixteen sections. It may be considered as the source of all the Anga; it exposes the heretical opinions of sophists, and, in a manner suited to the comprehension of adepts, it treats on the true nature of Ganesa, Bhaskara or the sun, Nilakanta, Lakshmi, and other forms of one divine being. The body of the law, called Smruti, consists of eighteen books, etc. etc., delivered for the instruction of the human species by Menu and other sacred personages. As to ethics, the Vedas contain all that relates to the duties of kings; the Puranas, what belong to the relation of husband and wife; and the duties of friendship and society (which complete the triple division) are taught succinctly in both. This double division of Anga and Upanga may be considered as denoting the double benefit arising from them in theory and practice. The Bharata and Ramayana, which are both epic poems, comprise the most valuable part of ancient history. Sanchya is two-fold, that with Iswara and that without Iswara, called Patanjala and Kapita; the latter, in six chapters, on the production of all things by the union of Prakriti, or nature, and Purusha, or the first male, etc. These books contain infinite contradictions. The Mimansa is in two parts, the Nyaya in two, and Sanchya in two; and these six schools comprehend all the doctrines of the theists. Lastly appears a work

written by Buddha; and there are also six atheistical systems of philosophy, entitled Yogachara, Sidhanta, Waibhashica, Madhyamica, Digambara, and Charvaka, all full of indeterminate phrases, errors in sense, confusion between distinct qualities, incomprehensible notions, opinions not duly weighed, tenets destructive of natural equality, containing a jumble of atheism and ethics; distributed, like all orthodox books, into a number of sections, which omit what ought to be expressed, and express what ought to be omitted; abounding in false propositions, idle propositions, and impertinent propositions. The Vedas consist of three Kanda, or general heads, namely, Carma, Gnyana, Upashasana, or Works, Faith, and Worship, to the first of which the author of the Vidyadesa, or View of Learning, a rare Sanskrit book, wisely gives the preference; as Menu himself prefers universal benevolence to the ceremonies of religion.—*Cal. Review; Wilford; As. Res.* ii. p. 302.

VIDYA-DHARA, with other names in Hindu mythology, inferior deities dwelling beneath the earth and sky; generally benevolent.—*Dowson.*

VIGHNESWARA, Siva Mahadeva's elder son; his image is often standing in the temples of the Gramma-devata or village deities, and is called Ganesa.

VIGNE, G. T., a traveller who wrote on Persia, India, Kashmir, the Panjab, Kábul, Ladakh, and Afghanistan; Personal Narrative of a Visit to Ghazni, Kábul, and Afghanistan, and of a Residence at the Court of Dost Muhammad, 1840; Travels in Kashmir, Ladakh, Iskardo, the Countries adjoining the Mountain Course of the Indus, and the Himalaya, north of the Panjab, 1842.

VIHARA. The Buddhist vihara or monasteries are of two kinds:—1st, Cave vihara, of which several magnificent specimens have been described by Mr. Fergusson; and 2d, Structural vihara, of which some specimens still remain at Sanchi, but in a very ruinous condition.

The vihara or monastery caves of the first class consist of—(1) natural caverns, or caves slightly improved by art; these are the most ancient, and are found appropriated to religious purposes in Behar and Cuttack; next (2) a verandah opening behind into cells for the abode of monks, as in Cuttack and in the oldest vihara at Ajunta; the third (3) has an enlarged hall supported on pillars. The most splendid of these caves are those of Ajunta, though the Dherwara at Ellora is also fine, and there are some good specimens at Salsette and Junnar. The word vihara is supposed by some to be the source of the name Behar. Bihar or Vihar, the Sanskrit term for monastery, occurs in Unao in the province of Oudh, and again in Partabgarh in the same province. Vihara are also called Bhikshu griha. Vihara were for the accommodation of Buddhist bhikshus or mendicant monks living together in communities. The earliest form seems to have been one or more griha or cells with a verandah (padasala) or porch. Groups of caves are often called Lenas. There was usually a permanent spring or a cistern cut in the rock, beside or under the cell. In former times this term was applied differently from now. Hiwen Thsang named the great tower at Buddha Gya a vihara, and the Mahawanso applies the term indiscriminately to temples and residences. Modern writers restrict it to monasteries of the Buddhists. —*Ferg. and Burg. Cave Temples.*

VIJAYA or Vyjya, a Buddhist prince from Kalinga who made a successful expedition to Ceylon, B.C. 483. His title is taken from the Sanskrit word written similarly, meaning conquest. A system of caste was introduced by king Vijaya amongst the Ceylon Buddhists, which still prevails there, though directly opposed to Buddhist doctrines, and not existing in any similar form in other Buddhist countries.

Vijaya, one of the warders of Vishnu's palace.

Vijaya, the ever-victorious tree produced from the churning of the ocean.—*Fergusson.*

VIJIANAGAR, called also Vidyanagara, is the modern Bijanagar, in Bellary district, Madras, lat. 15° 18′ N., long. 76° 30′ E.; population (1871), 437. It is in ruins, on the right bank of the Tumbudra. The proper name of this village is Humpi, but Vijianagar was the name of the dynasty and the kingdom which had its capital here. The dynasty claimed descent from the Yadava race, and they seem to have founded it in the 14th century, about S.S. 1258 or A.D. 1336, after the overthrow of the kingdom of Warangal by the Muhammadans in A.D. 1323. It was founded in the reign of Muhammad Taghalaq, according to one account, by two fugitives from Telingana, but according to Prinsep, in 1338 by Bilal Deo of Carnata, who resisted Muhammad Taghalaq, and founded Vijianagar. The family genealogy deduces a descent in the direct line from Pandu of the Lunar dynasty, and imperfectly follows the Puranic lists to Chandrabija, the last of the Magadha rajas. The first in authentic history is Nanda, A.D. 1034, who founded Nandapur and Warangal. On the capture of Warangal, A.D. 1323, and the subversion of the Belala dynasty, two of its officers established a new government at Vijianagar on the banks of the Tumbudra. The city was completed A.D. 1343, Anagundi being a suburb on the opposite bank of the river. The rulers were designated Rayel or Rayer, and were Saiva Hindus. In 1490, Narsingha, a Vaishnava, founded a new dynasty; he extended his power into the Dravida country, erected strong forts at Vellore and Chandragiri, and in 1510 or 1515, a successor, Krishna Rayer, reduced the whole of Dravida, including the Chola and Pandiyan kings. In 1564, the Vijianagar army was defeated at Talikottah by the confederate Muhammadan kings of Bijapur, Ahmadnaggur, Golconda, and Beder? and Ram Raja, the 7th prince of the house of Narsingha, was slain. Vijianagar was sacked and depopulated, and the doab between the Kistna and Tumbudra partitioned amongst the conquerors. The successor of Ram Raja established himself in Pennakonda, 85 miles S.W. of Bellary, from which, in 1570, Timmah Raja removed to Chandragiri, about 11 miles W.S.W. of Tripatty, at which place and at Vellore in 1597 he was ruling with some magnificence over the Naiks of Ginji (Kistnapa), Tanjore, Madura, Chinnapatam (Jug Deo-rayer), Seringapatam (Trimulraj), and Pennakonda. The Dutch had been established at Pulicat, and persuaded this ruler to refuse the English a settlement. In 1599, two Portuguese missionaries visited Chandragiri, and were received by the ruler. About 1644, the Carnatic was invaded by an army from Bijapur, when Ginji and Chandragiri were reduced, and

Sri Ranga Rayel, after concealing himself in the Northern Circars in 1646, escaped to Bednore, where he was sheltered by the raja, formerly one of his own dependents. This is the last that is known of the old Vijianagar dynasty, though a branch of the family long resided at Chingleput, and continued for a time to assume a kind of state.

Abd-ur-Razaq, an ambassador from the grandson of Timur, visited the south of India in A.D. 1442. He describes Vijianagar in terms so glowing, that it is scarcely surpassed by that in the story of Prince Ahmad in the Arabian Nights. Nicolo di Conti (A.D. 1420) is so extravagant as to say it is 60 miles in circumference; Bartema says 7 miles, and adds that it is very like Milan.—*Elph.* p. 428.

VIJNANESWARA BHATTA flourished in the 10th century of the Christian era, author of the Mitakshara, a commentary on the law book of Yajna Valkya.

VIKRAMADITYA, meaning sun of might or sun of prowess, is a title which was assumed by more than one ruler in India. Mr. Fergusson gives the following names:—

	A.D.
Vikramaditya of Malwa,	490
Siladitya of Malwa,	530
Prabharakara of Kanouj,	580
Raja Vardhana,	605?
Pulakesi II. of Kalyan,	609
Sri Dharasena III. of Balabhi,	650
Vikramaditya of Kalyan,	660?
Vinayaditya of Kalyan,	680
Vijayaditya of Kalyan,	695
Vikramaditya II.,	733

At another place Mr. Fergusson (p. 731) names five Chalukya rulers of this title at Kalyan—

Vikramaditya I., the 10th of the line.
Vikramaditya II., the 13th, began to reign A.D. 733.
Vikramaditya III., the 20th, restored the monarchy A.D. 773.
Vikramaditya IV., the 22d, began to reign about A.D. 1008.
Vikramaditya V., Kali Vikrama, Tribhu vana Malla, A.D. 1076.

Vikramaditya, king of Ujjain, won his paramount place in Indian story by driving out Scythian invaders. An era, the Samvat, beginning in B.C. 57, was founded in honour of his achievements. He reigned at Ujjain in Malwa from A.D. 495 to 530. He was a liberal ruler, a patron of learning, encouraged art. He was a follower of the Brahmanical religion, a worshipper of Siva and Vishnu. His successor Siladitya seems to have returned to the Buddhist faith. Some modern works state that king Bhoja, ruler of Malwa, who about A.D. 1040–1090 dwelt at Dhara and Ujjayini, was the Vikramaditya whose court was enlivened by the nine learned, known as the nine gems, nawa-ratna,—Dhanwantari, Kshapanaka, Amarasinha, Sanku, Vetalabhatta, Ghata Karpara, Kalidasa, Varamihira, and Vararuchi. Dhanwantari wrote the Nirghanta on medicine, and two others; Kshapanaka wrote on the primary elements; Amarasinha, a Sanskrit dictionary, and a work on the Mimansa philosophy; Sanku, Vetalabhatta wrote on the Alankara, and a commentary on the Vaiseska philosophy; Kalidasa wrote the Sankhya tatwa Kumudi, the Kumara. Ragoba Moraba of Bombay translated into English the adventures of Vikramaditya of Ujjain.

The Vikramaditya, king of Kalyana, is supposed to have reigned from A.D. 1076 to 1127. His adventures have been written by the poet Bilhana. He was the son of the great king Ahavamalla, whose queen, after some time, bore to him three sons, Someswara, Vikram, and Jayasimha. Vikram ultimately succeeded to the throne. He twice made war against the Chola kingdom, and he took Kanchi. On Jayasimha revolting, 1077, he attacked and defeated him.—*Dr. James Fergusson, P. A. S. J.* iv., 1870, p. 94; *Weber*, p. 202.

VIKRAMADITYA ERA, or Samvat or Sambut era, B.C. 56, is in use throughout Telingana and Hindustan. The prince from whom it was named was of the Tuar Rajput dynasty, and is supposed to have reigned at Ujjain (Ujjayini) 135 years before Salivahana, the founder of the Saka era, south of the Nerbadda (Narmada). The Vikramaditya or Samvat era commenced when 3044 years of the Kaliyug had expired, *i.e.* B.C. 57 years, so that if any year, say 4925 of the Kaliyug, be proposed, and the last expired year of Vikramaditya be required, subtract 3044 therefrom, and the result, 1881, is the year sought. To convert Samvat into Christian years, subtract 57, unless they are less than 58, in which case deduct the amount from 58, and the result will be the date B.C. The era Vikramaditya is little used in the Peninsula of India, although its current year is generally inserted at the head of the calendar. In those provinces where it is current, it serves to number the luni-solar years, in the same manner as the era Salivahana in the Carnatic does for the solar ones.—*Cole. Myth. Hind.; Warren's Kala Sankalita; As. Res.* vi.; *Thomas' Prinsep*, p. 157.

VIKRAMCHARITRA, or the Adventures of Vikramaditya, king of Ujjain, is a celebrated book, in much favour with the Hindu races of British India. The author is not known. Further adventures of Vikram are related in a Prakrit poem by Haridas, whose era is not known.

VIKRAMORVASI, Vikrama and Urvasi, or the Hero and the Nymph, a story in a drama by Kalidasa, in which the hero is Pururavas, and Urvasi is an Apsaras who came down from Swarga, from having incurred the imprecation of Varuna and Mitra. On earth Pururavas and she fell in love with each other, and she bore him six or eight or nine sons. The story is in the Satapatha Brahmana, and in the Bhagavata and other Puranas. The myth is supposed to refer to the action of the sun (puru-ravas) on the morning mist (urvasi).—*Dowson.*

VIKRAMU. TEL. Any idol.

VILLAGE.

Hiang,	CHIN.	Grama,	SANSK.
Basti, Gaon,	HIND.	Bang,	SIAM.
Kyong,	LEPCHA.	Thiong,	TIB.

Go, Gao, Gon, Grama, Gama, Gramanu, Gramam, Gram, Gam, Ganw, Gaon are derived from the Sanskrit. In former times, in the whole of India, the property in the land resided in the village communities, and this is still the case with the greater part of it. The village community is not, however, co-extensive with the cultivating inhabitants of the village; it consists of the descendants or representatives of those by whom the village was, at some remote period, conquered or reclaimed from waste. In most cases these proprietors are a part, and in some the whole of the agricultural population of the village. Any remainder consists of the descendants of persons who have taken up their residence in the village

at later periods, with the permission of the proprietors, some of whom have remained tenants-at-will, while others have by grant or prescription acquired a fixity of tenure. The village proprietors formed prescriptively the municipal government of the village, and village government was the only institution, properly so called, which the Hindus possessed.

Corporate villages are still in many parts of India an institution of the country. They are municipalities governed by a headman, often hereditary, and the different trades and professions practised by individuals, who received a regulated remuneration. Village communes of India are little republics, having nearly everything they can want among themselves, and almost independent of any foreign relations. The village watchmen are called Pasban, Gorayet, Peik, Douraha in Hindustan; Tillari in the south of India amongst the Teling race; Paggi in Gujerat. There never was cultivation in common, but each man broke up as much land as he could, and it belonged to him who first tilled it. Local taxes for common expenses were rateably raised. By the term village is strictly meant, not merely the collection of dwellings which the cultivators inhabit, but the whole area which is in their occupation. Agriculturists in Northern India dwell in village communities, in Central India they are village proprietors, and in Southern and Western India they are ryots under the ryotwari system, much like the peasant-proprietors of Europe. Gujerat cultivators do not live, as those of European countries do, each upon his own farm, but are invariably concentrated into villages.

The village system of land assessment is current in the N.W. Provinces, the Panjab, Nagpur, and Oudh. In Cuttack is a mixed plan of the ryotwar and village system.

Land surrounding the village homestead in N. India is called bara, also in the Upper Doab, goind. The circle beyond the bara is called munda, majhola, or agla, and the outer circle jungle (jangal).

The Gramma-deva, the tutelar deity of a village, is sometimes one of the Hindu pantheon; sometimes, as in the south of India, it is Hanuman; sometimes one of the Ammun; often a shapeless stone or piece of wood. The Gramma-devata are generally on the outskirts of the villages, frequently beneath a tree, and are usually exposed to the open air without any covering temple. So long as the affairs of the community are ordinarily prosperous and no calamity threatens, they are content with the worship common to the sect to which they belong, but in seasons of trouble the Gramma-devata are largely resorted to. When the calamity is general, such as a drought or a pestilence, or a murrain amongst the cattle, the entire village will repair to the village deity, and seek by prayer and offerings to obtain release. All the Assamese regard high trees and sequestered groves as the haunts of spirits. — *Select Committee, House of Commons*, 1832; *Forbes' Rasamala*, ii. p. 241; *Wils.*; *Campbell*, p. 6; *Mor. and Mat. Prog.*, 1858.

VILLANOUR, a small native village, situate about 7 miles to the west of Pondicherry, containing a huge pagoda. Inside the pagoda is a large square tank.

VILLAPAKAM TANDAVARAYA, a Mudaliar, was a teacher in the College of Fort St. George, Madras. In 1825 he wrote a catechism of Tamil grammar, entitled Ilakkana Vina Vidai; he translated the Panchatantra stories into Tamil, and wrote a book of fables called Katamangsari. He likewise edited several Tamil lexicons. His prose style is greatly admired.

VILLARSIA, a genus of plants belonging to the natural order Gentianaceæ, named after Villars, a French botanist. There are about 16 species of this genus, either aquatic or marsh plants, with alternate entire leaves and yellow flowers, inhabitants of all parts of the world. One only is a native of Europe; Villarsia Indica, cristata, and nymphæoides occur in every part of India, and afford a good bitter.

Villarsia cristata, *Spreng.*

Menyanthes cristata, *Roxb.*	Chirialli, . . . TEL.
Ch'hoto-pan-chuli, BENG.	Autara tamara, . ,,

A common plant, with small white flowers, floating in sweet water ponds all over the East Indies.

Villarsia Indica, *Vent.*

Menyanthes Indica, *Linn.*	Indian buckbean, . ENG.
Buro-pan-chuli, . BENG.	Nedel ampel, MAL., TAM.
Chuli, . BENG., HIND.	Autara tamara, . TEL.

This fresh-water plant is found floating in lakes and tanks. Its tuberous roots are used medicinally. It has middle-sized flowers, with a yellow tube and a white-bearded limb.

Villarsia nymphæoides, *Vent.*

Kuru, ... KAGHAN.	Khair posh, . KAGHAN.
Gul jafari purnka, ,,	

A floating plant, found in ditches and slow-running streams in every part of Hindustan; in Kashmir it vegetates on the lakes, and is given as food to cows, in the belief that it increases their milk. It is a beautiful plant, and may be easily cultivated. It has a large yellow flower, which is curiously plaited.—*Honig.* p. 364; *Stewart*; *Roxb.*; *O'Sh.*; *Voigt*; *Hogg*; *Irvine.*

VILLI are a race dwelling in hamlets of five or six huts on the outskirts of most of the villages in the district of Chingleput, and sometimes called Yenadi. They are herbalists. They have Mongol features; the men have scant hair on the lip or chin, and no whiskers. They are polygamists. They eat all animal food except the flesh of the cow. They dig up the wild chay root. The average height of the men was 5 feet 5 inches, and weight 83 lbs. Other forest races are the Chenchuar, Irular, Kampani, Matraj or Muttaracha, and Yanadi.

VILLIPUTTURAR was a Vaishnava Brahman. Opinions differ with respect to the time he lived. He wrote an imitation in 3373 stanzas of the first ten Parvas of the Mahabharata.

VIMANA, the pyramidal tower of a Hindu temple, erected over the spot where the idol is placed.

VINA, the Hindu lyre, formed by a flat piece of wood with strings, having a gourd at one end, and sometimes one at both ends; seen in plates in the hands of Nareda, Saraswati, and the celestial choristers. See Krishna.

VINAGO AROMATICA, the Columbia aromatica of Latham, is of a mild and timorous disposition, and is generally seen in flocks or societies, except during the period of reproduction, when they pair, and retire to the recesses of the forest. The nest is simple, and composed of

a few twigs loosely put together, and the eggs are two.

VINAYA. SANSK. In Buddhism, morality or discipline. Vinaya-pitaka, SANSK., the Treasury of Discipline, one of the Tripitaka or Three Treasuries of the Buddhists.

VINCA, a genus of plants belonging to the natural order Apocynaceæ. V. herbacea, V. major, V. minor, V. pusilla, and V. rosea are known. Their English name periwinkle is derived from the French pervenche; but the French also call V. major the Violette des sorciers, and the Italians Fiore di morte, from the practice of making garlands of it in sorceries and incantations.

Vinca pusilla (V. parviflora, *Roxb.*), a small erect annual, common in the East Indies; stem smooth. Applied in India as an external stimulant in lumbago.—*Royle.*

Vinca rosea, *Linn.* Catharanthus roseus, *Don.*

Madagascar periwinkle. | Rattan jot, . . . HIND.
Gul-firingi, . . . BENG. | Billa ganneru, . . TEL.

A native of China, Cochin-China, common in Indian gardens, with large rose-coloured flowers. —*O'Sh.*

VINCENT, WILLIAM, author of The Voyage of Nearchus from the Indus to the Euphrates, London 1797; The Periplus of the Erythræan Sea: an Account of the Navigation of the Ancients from the Sea of Suez to the Coast of Zanguebar, London 1800–1805.

VINCETOXICUM CANESCENS. *Dne.*

V. vulgare, *Ræm. and Sch.* | Tranna . . . of RAVI.

Not uncommon in parts of the Western Panjab Himalaya, from 5000 to 9500 feet. In some places the natives commend its khushbu (perfume), which is really a rank heavy smell given out when it is bruised.—*Stewart.*

VINDHYA or Vindhyachala, also Bind'h and Bindhya, a great series of mountain ranges separating the Gangetic basin from the Dekhan, and forming a well-marked, although not quite continuous, chain across India. The name was formerly used in an indefinite manner to include the Satpura Hills, south of the Nerbadda; and indeed certain of the Sanskrit Puranas apply it specially to the Satpuras. The Vindhyas are now restricted to the ranges on the north of that river. The Vindhyas occupy a considerable place in the mythology of India as the great demarcating line between the Madhya-desha, or 'middle land' of the Sanskrit immigrants, and the non-Aryan Dekhan. They are still inhabited to a large extent by aboriginal races, and the name Vindhya in Sanskrit means also a 'hunter.'

The range separates Hindustan proper from Southern India, and forms the northern boundary of the valley of the Nerbadda river, extending from Gujerat on the W. to the basin of the Ganges on the E., and comprised between the 22d and 25th parallels of latitude. The average height, 1500 to 2000 feet. Chumpanir, lat. 22° 34′ N., and long. 73° 41′ E., 2500 feet; crest of Jam Ghat, 2300 feet; mountain in Bhopal, 2500 feet; Chindwarra, 2100 feet; and Patchmaree, vaguely stated to be 5000 feet, but this is probably an exaggeration; Dokgur, stated to be 4800 feet; Putta Sunka and Choura Doo, the highest, conjectured at 5000 feet; Amarkantak, a jungly table-land computed to be 3463 feet; Leela, a summit in Lanjhi Hills, lat. 21° 55′ N., and long. 80° 25′ E., 2500 feet; another of the same hills, in lat. 21° 40′ N., and long. 80° 35′ E., 2400 feet. The chain forms the southern buttress of the plateau of Malwa, Bhopal, etc. In the Saugor and Nerbadda territories its crest is but the brow of this table-land; but in the western part it rises a few hundred feet above the high land on its northern side. Connected with the western limits of the Vindhya range by a curved line of hills are the Aravalli mountains, which stretch almost to Dehli, and serve as a barrier between Central India and the western desert. The eastern portion of the Vindhya chain is a spreading table-land, from which spurs descend to the north and south, the latter separating the different valleys of Orissa. The table-land of Chutia Nagpur averages 3000 feet, and westwards near Sirguja is higher. Hazaribagh is about 1800 feet, and Parisnath Hill on the east is about 4500 feet; the most easterly spurs approach the Ganges at Monghir, Bhagulpur, and Rajmahal.

Geologically, few parts of India have excited more interest and attention than the districts adjoining the Nerbadda river; the great thickness of sandstones and associated beds, which form the mass of the Vindhya range, being the most striking and remarkable feature in that country. There is a great faulting, accompanied by much disturbance mechanically, and by much alteration chemically (more especially to the south of this fault), in the rocks which pass along the main line of the Nerbadda valley, along the continuation eastward of this line down the valley of the Sone, and thence across Behar, where the continuation of the same rocks forms the Gorakhpur Hills. It is considered a high probability that this line of dislocation was continued to the east by north up or towards the valley of Assam; its main direction being 15° E. to 18° N., corresponding with the main direction of the Vindhya range and the Khassya Hill range. South of this dislocation, the great group of sandstones, shales, etc., forming the Vindhya Hills, is almost entirely absent, unless the highly metamorphosed rocks there seen be the continuation downwards of the same series, greatly altered. This great group is altogether of a different character and of a more ancient epoch than the beds associated with the coals of Bengal and of Central India,—the latter resting quite unconformably on the former. Mr. Oldham gave the name Vindhyan to this great group, being best seen in the well-exposed scarps of the Vindhyan range; and to the subdivisions in ascending order, the names Kymore, Rewah, and Bundair; but he applied these names only provisionally, as he thought it possible that the Rewah limestone and Bundair sandstone are only repetitions of the Sone valley limestone and sandstone, produced by faulting. Resting unconformably upon the Vindhya formation, there is a considerable thickness of sandstones, shales, and coals in Central India, much disturbed and traversed by trap-dykes. The total thickness of this group in this district exceeds some thousand feet. In these beds occur numerous fossil plants, which thoroughly identify these rocks with the coal-groups of Bardwan, of Hazaribagh, and of Cuttack. Taking it as proved that the strata at Kotah, from which fish and Saurian remains had been obtained, are the same with those of

Kampti near Nagpur, the strong Permian analogies of the Saurians (Brachyops) ought not to be overlooked.

The Nerbadda is fed almost entirely from the south, as the watershed of the Vindhyan tableland stands but little back from its southern face. On both sides of the valley the high ground is often occupied by basaltic trappean rocks. On the north such rocks spread into wide patches over the country towards Bhopal, Saugor, and Damoh, in which direction they gradually die out; on the S. and S.W. the trap is found to cover considerable areas among the Gondwana Hills, and it becomes more and more the prevailing surface rock in this direction, towards the great trap area of the Dekhan. The prevalence of regularly-bedded, fine-grained grits, with a characteristic red colour, is the most striking lithological feature of the Vindhyan group; and, speaking of the formation generally, its most marked characteristic certainly is the persistency of this lithological aspect over great areas. This sameness of texture is strongly in contrast with the prevailing character of all the more recent sandstone formations to the south. Ripple-marking may be considered as a phenomenon characteristic of the Vindhyan series; almost totally absent in all the other groups of sandstone of Central India, it is almost everywhere throughout them found preserved in the most extraordinary perfection.

The Vindhya mountains form the southern limit of Hindustan, but, further south, separated by the deep valley of the Nerbadda, is a parallel chain called Injadri or Satpura, which must be crossed before we reach the next natural division in the valley of the Tapti. This small tract is low, but the rest of the Dekhan is almost entirely occupied by a table-land of triangular form about the level of that of Central India.

The Vindhyan languages, and particularly the Gond, have a closer agreement with the Carnatica and Tuluva, and even with the Kodagu and Todava, than with the adjacent Telugu. This is seen in the forms of many common Dravidian roots and particles. Gondi has also some special affinities with ancient Tamil. It is probable that the Telugu and Mahrati have spread inland from the east and west into the upper basin of the Godavery, and thus cut off the ancient connection between the Gondi and the Carnatica and the Malealam, which, with the Konkani, Tulu, and Tamil, prevail on the low country throughout the rest of the belt to Cape Comorin. The main portion of the South Dravidian land is occupied by three populous nations, speaking as many dialects.

Professor Max Muller is of opinion that when the Aryan tribes immigrated into the north of India, they came as a warrior people,—vanquishing, destroying, and subjecting the savage and despised inhabitants of those countries; but that, in the countries south of the Vindhya, their entry was in the way of colonization and instead of introducing their own Sanskrit language, they adopted those of the southern nations,—refined and improved them, till they even rivalled the Sanskrit in perfection, though there remain up to the present day, in some parts of the interior of the Peninsula, savage tribes never reached by the superior civilisation of the Aryan. These earlier inhabitants of India were considered by the Brahmans as impure and unworthy to partake of their religious sacrifices, and found a refuge in the thick forests of the mountain districts, and in the countries south of the Vindhya range, while some of them were tolerated by the Brahmans, so as to remain in a state of slavery.—*Imp. Gaz.; Williams' Nala*, p. 220; *Ritchie*, i. p. 6; *Hind. Th.; Prof. Max Muller, Rep. Brit. Ass.*, 1847, p. 330; *Elphinstone's India*, p. 3; *Dr. Oldham.*

VINDRA-VANA, the forests of Vindra, in which were placed many temples sacred to Kaniya. One is on the Yamuna, a few miles above Mathura. A pilgrimage to this temple is indispensable to the true votary of Krishna. See Bindraban.

VINDUSARA or Bimbasara, son and successor of Chandragupta, to whose court a second Greek embassy was sent, either by Seleucus, or by his son Antiochus Soter. The ambassador Daimachas was considered by Strabo the most lying of all the Greek historians of India. Vindusara died B.C. 263, and was succeeded by his son Asoka.—*Thomas' Prinsep.*

VINE. Of this order of plants, the Ampelideæ, the grape-vine (Vitis vinifera, *L.*), the most important plant of the order, may be taken as the type. They are all climbing, jointed shrubs, often with abortive flower branches serving as tendrils to lay hold of their support. None of the order are native in Europe; they are chiefly East Indian. The grape-vine, cultivated extensively in many parts of India, Persia, Afghanistan, France, Germany, South Europe, Atlantic Islands, United States, Cape, etc., was very probably native originally of Western Asia, and to the south of the Caspian. From its innumerable varieties, affected by different climates and soils, we have, besides grapes yielding the various wines of commerce, other sorts which are dried, forming the Valencia, muscatel, sultana, and kishmish (without seeds, from Turkey) raisins; also currants, the dried fruit of a small-fruited variety of the grape-vine (V. vinifera, *var.* Corinthiaca), cultivated in the Ionian Islands, Greece, Liparis, etc. These are quite distinct from any species of Ribes, the currant bush of orchards, to which they are not botanically related. See Wine.

VINEGAR. Acetum, Lat.

Khull, ...	Arab.	Vinagre, . .	Port., Sp.
Tsu, Nung, . . .	Chin.	Ukzus, ...	Rus.
Azyn, Azyn zur, .	Dut.	Ganchica, . . .	Sansk.
Vinaigre, ...	Fr.	Eissl, ...	Sax.
Essig saure, . . .	Ger.	Kadidia, ...	Singh.
Sirka, ...	Hind.	Kadi, ...	Tam.
Aceto, ...	It.	Pulla millu, . .	Tel.
Chuka, . . .	Maleal.		

Vinegar is an impure acetic acid, and several varieties of it are known in commerce, such as wine, malt, wood, sugar, toddy, etc., vinegar, all extensively employed for pickling, in domestic cookery, etc. Acetic acid is the volatile principle, to the presence of which, diluted with variable proportions of water, vinegar owes its aroma and pungency. This acid exists, ready formed, in notable quantity in certain plants, as Sambucus niger, Phœnix dactylifera, and Rhus typhenus. It may be readily generated by the fermentation of various vegetable and animal substances, especially the former. For commercial purposes, vinegar is made from certain vegetable and spirituous infusions, as those of the grape, malt, and the sugar-cane; but any vegetable infusion capable of yielding alcohol will also, when exposed to the necessary conditions, furnish vinegar. In

most cases, and indeed whenever vinegar is manufactured on a large scale, and the vinous or alcoholic fermentation precedes the acetous, the vinegar is formed entirely at the expense of the alcohol. In India, vinegar is obtained from the Dolichos uniflorus, but is also made from the sediment of palm wine or toddy, and is coloured artificially. The juice of the gomuti palm, Arenga saccharifera, put into a jar for five days, is converted into excellent vinegar, equal in strength to that produced by the vinous fermentation of Europe. Large quantities of the palmyra toddy are converted into vinegar in Ceylon, and used for pickling gherkins, limes, the undeveloped leaves of the cocoanut and palmyra trees, and other substances. It is also prepared from the toddy of the cocoanut palm. The toddy is collected in fine weather, put into jars, and kept covered for a month; it is then strained and replaced in the same jars, with the addition of a little chilli (Capsicum frutescens), commonly called bird pepper, a small piece of ghorka, fruit of the gamboge tree, the red sort of which is to be preferred, being most acid, and the pod of the Hyperanthera moringa. At the expiration of five weeks or a month, it becomes very excellent vinegar. The vinegar obtained from sugar-cane juice is generally a poor stuff, and does not contain more than 2 per cent. of acetic acid; but at some places it is made well, especially at Dehli, and really excellent at Peshawur, made from grapes, quite fit for table use. Acetic acid can be distilled from vinegar, but the common country vinegar of the bazar generally contains only a very small portion of acetic acid, often not more than 2 per cent. If ten measures be taken of vinegar, it should be distilled till nine have passed over. It is made in China from rice and from all other grains, and is used in lieu of rennet in making cheese.—*Powell, Handbook*, i. p. 312; *Faulkner; M'Culloch; Royle; O'Sh.; Eng. Cyc.; Tennent.*

VINGORLA, a seaport town, with fort, in the Ratnagherry district, Bombay, situated 84 miles S. by E. of Ratnagherry town, in lat. 15° 51′ 30″ N., and long. 73° 39′ 45″ E. A lighthouse erected in 1870 is situated on an isolated rock in the west of Ratnagherry district, Bombay, Burnt Island, lat. 15° 53′ 30″ N., and long. 73° 27′ 30″. The bay is quite sheltered, except from the south.

VIOLA, a genus of plants of the natural order Violaceæ. About 19 species are known. The roots of most have an acrid, nauseous taste, and have emetic properties; and in Europe, V. arvensis, canina, odorata, and tricolor are so used. The Akukira and Banafsha plants of Kaghan are species of Viola; V. distans and V. serpens are of the Khassya; V. glaucescens is of the Peninsula; V. odorata is of Europe, Siberia, and China; V. Patrinii is of Siberia, the Neilgherries, and in Hazara, a dark-flowered variety has a particularly fine scent; V. Roxburghiana is of Bengal; and V. Wightiana is of the Peninsula. V. hirta, lactea, and lutea are other species. V. cinerea, *Boiss.*, grows in the plains, Trans-Indus, and in the Salt Range; and several species are found in the Himalaya up to 10,000 feet, perhaps the commonest being V. serpens, *Wall.* The plants of the species are found in the bazars of India, and considered diaphoretic and aperient. The Persian name Banafsha is given to several species. Dr. Royle figured three Himalayan species, V. serpens, V. reniformis, and V. Kanawarensis; the first of which is found in Mussoori, the second on the Chur mountain, the last in Kanawar.

Under the name of Bekh-banafsha, or violet root, and having precisely the smell of the fresh flower of V. odorata, the well-known orris root, or Iris florentiana, is also sold in the bazar. Excellent issue peas are made from this root.—*Royle; O'Sh.; Stewart; Murray.*

VIOLA ODORATA. *W.* Sweet violet.

Behussej, . . . Arab.	March violet, . . Eng.
Tsze-kin-hwa, . . Chin.	Banafsha, Hind., Pers.

This violet has no stem. It is native throughout the whole of Europe and in Siberia and China, and its delicious scent has made it a great favourite. In the dry state it is sold in all Indian bazars, and is prescribed in infusion by the hakims as a diaphoretic in the treatment of fever. It nauseates slightly, owing to its containing a very minute quantity of the principle termed violina, closely resembling the emetine on which depend the virtues of the ipecacuanha of Brazil. The V odorata, as sold in the bazar, has dry, thready, fibrous roots, a pale-yellow colour, knotty, some as thick as a quill. The leaves are heart-shaped, flowers blue. The entire plant retains slightly the delightfully sweet smell characteristic of this tribe.—*Royle; Riddell; O'Sh.; Jaffrey.*

VIOLA TRICOLOR, Heartsease or pansy; flowers vary much in size; some only are odorous. The colours are mixed and numerous, being from deep-purple and yellow to blue and white, crimson, etc. In Europe this flower has been brought to great perfection, by the mode of continual offsets. The flowers are not generally scented, but some are found so on the Neilgherry Hills. The seed should be taken as soon as the seed-vessels appear round and full; they may be dried in the house and the seeds preserved; if left on the plant, the capsules dry and open of themselves, fresh plants springing up from the seed that drops out. Requires a light, loamy, vegetable soil.—*Riddell.*

VIOLIN, or Fiddle.

Violen, ... Dut.	Violini, ... It.
Violons, ... Fr.	Violines, ... Sp.
Violinen, ... Ger.	

A stringed musical instrument.

VIPASA, the Sanskrit name of the river known to the Greeks as the Hyphasis, the river Beas.

VIPERINE SNAKES form the third sub-order of the Ophidia or poisonous snakes, and may be thus shown:—

3. Sub-order, Viperine Snakes.

1. Pit Vipers—Crotalidæ.

Trimeresaurus gramineus, *Shaw*, eastern part of Asia.
T. erythrurus, *Cant*, Bengal, China, Siam, Java.
T. carinatus, *Gray*, Sikkim, Bengal, Rangoon.
T. purpureus, *Gray*, Penang, Singapore.
T. Anamallensis, *Gthr.*, Anamallay Hills.
T. monticola, *Gthr.*, Nepal, Sikkim.
T. Wagleri, *Schley.*, Malayan Peninsula.
T. strigatus, *Gray*, Neilgherries, Dekhan.
T. trigonocephalus, *Merr.*, Ceylon.
T. mucrosquamatus, *Cant*, Assam.
Peltopelor macrolepis, *Beddome*, Anamallay.
Calloselasma rhodostoma, *Reuss.*, Siam.
Halys Blomhoffii, *Boie*, Japan, Formosa.
H. Pallasii, *Gthr.*, Tartary.
H. Himalayanus, *Gthr.*, Tibet.
H. Elliotii, *Jerd.*, Neilgherries.
Hypnale nepa, *Lam.*, Ceylon, Southern India.

II. Vipers—Viperidæ.

Daboia Russellii, *Shaw*, Ceylon, S. India, Himalayas. Echis carinata, *Schneid.*, Southern India.

—*Gunther's Reptiles.* See Reptiles.

VIR or Bir. SANSK. Man, the Latin Vir. Birbani, the term amongst the Jat for a man's own wife. A femme couverte.

VIR. PUKHTU. Lamentation.

VIRABHADRA or Ehrabadra, in the mythology of the Hindus, a terrible being, created by Siva for the purpose of destroying the sacrifice of Daksha. His image stands in the temples of the Gramma-devata, is by some called an avatar. Sculptures of him are in the caves of Ellora and Elephanta. Many Teling and Tamil Hindus take his name. As son of Siva, he is fabled to have been produced from the jatra, or plaited locks of that deity, which he cut off and threw on the ground in a moment of frenzy, on learning the death of Sati, caused by the curse of Daksha. Virabhadra immediately attacked Daksha and cut off his head, which fell into the fire prepared for a sacrifice, and was burned. He is represented armed with various instruments of destruction; and the representations of him are usually seen with the head of a goat (with which that of Daksha was replaced on his body) near them, or accompanied by a human figure with a goat's head.—*Cole. Myth. Hind.* p. 74. See Daksha.

VIRA CHARITA, tales by Ananta.

VIRAGI, Hindu religious devotees. They are ascetic religious mendicants, properly Vaishnava sectarians, especially in the form of Rama, and in relation to him of Sita and Hanuman. Some of these ascetics live in mat'hs, though others of them find employment in conveying, for purposes of worship, the holy water of the Ganges to many of the most distant parts of India, in pitchers slung on bamboos. The term is from the Sanskrit Vi, privative, and Raga, passion, implying a person devoid of passion, and is therefore correctly applicable to every religious mendicant who affects to have estranged himself from the interests and emotions of mankind. Virakta, the dispassionate, and Avadhuta, the liberated, have a similar import, and are therefore equally susceptible of a general application. They are, indeed, so employed in many cases, but it is more usual to attach a more precise sense to the terms, and to designate by them the mendicant Vaishnava of the Ramanandi class, or its ramifications, as the disciples of Kabir, Dadu, and others. The ascetic order of the Ramanandi Vaishnava is considered to have been instituted especially by the twelfth disciple of Ramanand, Sri Anand. They profess perpetual poverty and continence, and subsist upon alms. The greater number of them are erratic, and observe no form of worship; but they are also resident in the mat'h of their respective orders, and are the spiritual guides of the worldly votaries. It is almost impossible to give any general character of these Viragi, as, though united generally by the watchword of Vishnu or his incarnations, there are endless varieties amongst them, both of doctrine and practice. Those who are collected in the mat'h are of more fixed principles than their vagrant brethren, amongst whom individuals are constantly appearing in some new form with regard to the deity they worship or the practices they follow.—*Professor Wilson, Hindu Sects; Cole. Myth. Hind.*

VIRAJ, the primeval being, represented under a form half male, half female. The term is sometimes applied to Siva and Parvati. Viraj is the male half of Brahma, the type of all male creatures. Mr. Colebrooke informs us that, according to one account of the cosmogony of the Hindus, the primeval being felt no delight, for man delights not when alone. He wished the existence of another, and instantly became such as is man and woman in mutual embrace. He caused this, his own self, to fall in twain, and thus became a husband and wife; therefore was this body, so separated, an imperfect moiety of himself. This blank, therefore, is completed by woman; he approached her, and thus were human beings produced, etc. etc.—*Cole. Myth. Hind.* p. 100.

VIRAKAL and Maastikal. TAM. Monumental stones and trophies in various parts of India.

VIRA-KANKANAM. TEL. A bracelet worn by warriors; the mark that they were bound to vanquish or to die.

VIRAKTA, a class of the Dadhu Panthi sect of Hindus. They go bare-headed, and have but one garment and one water-pot.

VIRA-RAJENDRA-PET or Kukluru, a town in Yedenalknād taluk of Coorg, lat. 12° 12′ 34″ N., and long. 75° 51′ 6″ E.; pop. (1871), 3413. In 1805 a colony of native Christians, immigrants from the Konkan, settled here, under the charge of a Roman Catholic, who receives an annual allowance from the Government, also grants towards the restoration of the church.—*Imp. Gaz.*

VIRA-SAIVA, Hindu worshippers of the god Siva. They are divided into two sects, one semi-Brahmanical or High Church, called Aradhya; the other is anti-Brahmanical, and is called Jangam. The Aradhya claim to be descendants of Saivite Brahmans, and between them and the Smartta Brahmans there is a certain degree of reluctant intercourse, founded upon the rites of initiation (Upanayanam) which both parties use.

The Vira-Saiva form a subdivision of the Saiva, worshipping only the male energy. The other Saiva associate the Yoni, or female energy, with the linga. The origin of this sect is attributed to Basava, minister of a king of Kalyana, in the 12th century. He is fabled to have been an incarnation of the sacred bull Nandi, the vehicle of Siva. Allama Prabhu, afterwards regarded as an incarnation of Siva, was associated with him. The Vira-Saiva wear a small linga, enclosed in a metal case. Hence they are called Lingaet or Lingadhari. Vira is derived from a word denoting bravery. They nearly exterminated the Jaina in some parts of the Dekhan. Sometimes they are called Jangama, from Jangama, motion, claiming to be living symbols of deity. The mendicants often lead about a bull, the living type of the vahan bull of Siva.

Vedantists all bury the dead, also all the Gossi, all the Lingaet or Vira-Saiva, the five artisan castes, the Kansala, goldsmith, carpenter, iron-smith, brazier, and stone-cutter, all the Byragi and Sanyasi, and the gurus of the sects; likewise all the non-Aryan races, and tribes not admitted into Hinduism. The Vedantists' dead, and those of the Lingaet artisans, are all placed seated in a grave five feet square with a ledge on the south. As life becomes extinct, the body is made to

assume the attitude to be preserved in the procession and in the grave. It is placed against a wall, the legs are crossed underneath in the usual sitting attitude, and the head is fastened to a nail driven into the wall, and so retained till rigidity ensue. They are borne to the grave in a car, on the shoulders of relatives or friends. On reaching the burial-place, the Udwan reads prayers, and the body is seated on the side ledge with its face looking northwards; salt and ashes of cow-dung are placed on the head.

The Vira-Saiva are chiefly found where Canarese is spoken. A few of their books have been printed in Tamil,—Apisheka Malai, Nedungkalinedil, Kurungkalinedil, Nirangana Malai, and Kaittala Malai. These are by Siva Pirakasa Tesikar, who lived about the 17th century. They were printed in a small pamphlet by Saravana Perumal Iyer. The first treats of the anointing of the linga, specifying what articles may be offered. A small linga is often placed on the hand, considered as an altar. This is the subject of the last work. The others contain praises of Siva, for repetition during his worship.—*Brown's Essay on the Jangams.*

VIRATA, the modern town of Bairat, 105 miles S. of Dehli. Its raja sheltered the Pandava princes and Draupadi; he fought on the Pandava side, and was killed by Drona.—*Dowson.*

VIRGIN. Several races derive their descent from miraculously impregnated virgins. According to the Puranas, Ella, the earth, daughter of the sun-born Ikshwaku, while wandering in the forests was encountered by Budha (Mercury), and from the rape of Ella sprang the Indu race.

Yu (Ayu) was the first monarch of the Chinese. A star (Mercury or Fo) struck his mother while journeying; she conceived and bore Yu. Chengiz Khan was of this descent. The legend is that three sons were born of the queen from the visits of a ball of light that daily fell through the roof into her apartment, and on reaching the ground became transformed into a young man of an orange colour, with eyes of extraordinary beauty. The descendants of these three sons were called Niroun, signifying purity of descent. Chengiz Khan was eighth in descent from Boudantchar, the youngest of the three sons.

Amongst the ancient Mexicans Vitzli-putzli was the god of mercy. His name refers to the sun. He is said to have been the offspring of a virgin who was impregnated by a plume of feathers invested with all the colours of the rainbow, which descended from heaven into her bosom. The rainbow was a type of the reappearance of the sun.—*Fytche*, ii. p. 149.

VIRGIN OIL is the product of the perfectly recent fruit of the olive. It is of a greenish colour, and highly esteemed; common olive oil results from the expression of the fruits after they have undergone a slight fermentation; it is yellow, sweet, and well suited for culinary purposes. The oils inferior to this are consumed almost exclusively in the fabrication of soap, and are obtained by subjecting to the press a second time the crushed fruits which have already yielded the first and second qualities of oil. The finest olives and the worst oil are produced in Spain.

VIRIKA, amongst the Canarese race of Mysore and in the Southern Mahratta country, the ghost or evil spirit of unmarried or unchaste persons, or of those who have met a violent death. They are appeased by offerings.

VIRK or Birk, one of the most distinguished of the Jat tribes, is admitted among the Chalukya Rajputs by Tod.

VIRU PAKSHA, Sansk., or misformed eyes, a name of Siva.

VIS or Viss, or Passeree, an Indian weight. The Burmese viss or picktha is 140 tolas 100 tikals 40 pollams, or 3 catties=3 lbs. 2 oz.; 8 viss therefore make a maund of 25 lbs. The viss, however, varies in different localities. In Trichinopoly it is 3 lbs.; in Masulipatam, 3·515 lbs.; in some other places it is much more. Visary is a name in the Madras Presidency for the viss.—*Simmonds' Dict.*

VISABADI. Karn., Tam., Tel. A coparcenary village, of which the lands and profits are allotted by sixteenths and fractions of sixteenths.

VISA KANDRIKELU. Tel. Kandrika means a lot of land or portion of a village granted free of rent.—*Br.* p. 159.

VISAKHA DATTA, author of the drama Mudra Rakshasa.

VISAL DEVA, brother of Vira Dhavala of the Waghela dynasty, ruled at Patan from A.D. 1243 to 1261.

VISARJANA. Sansk. Liberating a bull; throwing images of divinities into the water at the conclusion of ceremonies to their honour.

VISCUM ALBUM. *L.*

Mistletoe, . . . Eng.	Jang, Ahalu, . Kaghan.
Banda, Bhangra, . Hind.	Kakbang, Ringi, Sutlej.
Bambal, Wahal, Kaghan.	Turapani, . . Tr.-Indus.

This parasite occurs at from 3500 to 9000 feet in the Panjab Himalaya up to the Indus, and in the Sulaiman Range. The plant was connected with Druidical superstitions; but the mistletoe of the Druids was exclusively that found upon the oak, and its appearance on that tree is now so rare that many persons have believed the mistletoe of the Druids either to have been some other plant, or to have had no real existence. Honigberger states that it is given in enlargement of the spleen, in cases of wound, tumour, diseases of the ear, etc. The fruit is covered with a viscid pulp, and is made by the Italians, and in Herefordshire, into a kind of bird-lime; and as it is a favourite food of the large or missel thrush, it is thought to have given rise to the proverb, 'Turdus malum sibi cacat.' The embryo curves its radicle down upon the bark, and then adheres firmly to it, and it is a twelvemonth before the plumule begins to extend. This may be to give the radicle time to pierce the bark and introduce itself below the liber, where it expands and acts the part of a root, by attracting thence the fluids which are necessary for the support of the parasite. This plant, and others of its order, offer the singular fact of the ovule not existing at the time of impregnation, nor appearing till from six weeks to two months later. Dr. Wight describes Viscum coralloides, moniliforme, orbiculatum, ramosissimum.—*Wight, Ic.; J. L. Stewart.*

VISCUM MONOICUM. *Roxb.* Kuchila ka mulung, Hind. It was accidentally discovered in 1836 that the Viscum found on the nux vomica trees of Cuttack possessed all the properties of the supporting tree. In 1837, Lieut. Kittoe, then at Cuttack, received information of the existence of a parasite on the nux vomica trees, which the natives

held to be an extremely powerful narcotic, and poisonous in small doses, and they used it in the treatment of agues and rheumatism. Mr. Kittoe having procured specimens of the leaves, sent them to Dr. O'Shaughnessy for experiment. Given in three-grain doses to dogs and kids, tetanic spasms set in in the course of from five minutes to a quarter of an hour, recurring at intervals, and proving fatal by fixing the diaphragm and causing asphyxia. A species is met with in China growing on the willow, called Liu-ki-sang.—*O'Sh.* p. 375; *Eng. Cyc.*

VISENIA VELUTINA. *W. Ic.*

Riedelia velutina, *D.C.*
Glossospermum velutinum, *Wall.*
Visenia umbellata, *Blain.*, *W. Ic.*

A considerable tree of Sumatra, Java, and Mauritius, of great beauty, with rose-coloured flowers and velvety leaves. It was introduced from Sumatra into the Calcutta Garden by Dr. Wallich.—*Voigt; Dr. Cleghorn in M. E. J. R.*

VISH. HIND. Ativisa, TEL. Aconitum ferox, *Wall. Cat.*; also any poison, and variously pronounced bis, bish. The Sanskrit syn. Ati visha is from Ati, very, and Visha, poison. Wallich applies the term to a species of betula, which he states to be an antidote to poison; and in like manner the word Nirvisha, an antidote, has been given to some kinds of aconite. But the Telugu word is always understood as designating an active poison, which is the character of the vish, bish, or bikh of Upper India.—*Royle; Roxb.; O'Sh.; Elliot.*

VISHA, the poison ordeal. If the accused person swallow it with impunity, he is innocent. Another ordeal is the kusha, or drinking of holy water.

VISHAKALLU and Pamukallu, also Telukallu. TAM. Bezoars. The terms mean respectively poison-stone, snake-stone, and scorpion-stone.

VISHALGARH, a native state in the Bombay Presidency. Its central point is in about lat. 16° 52′ N., and long. 73° 50′ E. Area, 235 square miles; population (1872), 32,414. The ruler of this state, with the rank of pritinidhi, or vicegerent, is a feudatory of Kolhapur, paying a yearly tribute of £598.—*Imp. Gaz.*

VISHNU, said in the Vedas to be called the unconquerable, and occasionally associated with Indra. In the Brahmanas he acquires new attributes. He is mentioned in Menu, the Mahabharata, and the Puranas. There is extant the anonymous Institutes of Vishnu, known as the Vishnu-Smriti, which Julius Jolly translated in 1883. But to ordinary Hindus, and their mythology, Vishnu is the second person in the triad or trimurti of Hindu deities, and is worshipped as the Supreme Being by about sixty millions of the people of India. He is a personification of the preserving power, and his worshippers are more numerous than all the other sects. He has on nine occasions assumed human and also other shapes (styled avatar), and has yet to appear in his last shape, that of a white horse. Of his avatars, the first four were as animals, and five have been in human shape. Vishnu is a personification of the sun, or, conversely, the sun is a type of him. This character, as well as that of time, he shares with Brahma and Siva. But Vishnu is sometimes the earth. He is also water, or the fluid and humid principle generally. Hence he is air; he is also space, and his colour is blue, its apparent tint. In pictures, Vishnu's ethereal character is indicated by mounting him, as his vahan, on a garuda composed partly of the eagle and partly of the man. Images and pictures of Vishnu either represent him in his own person, or in that of any of his avatara or incarnations, and such pictures may generally be distinguished from those of other deities by the chank shell and a wheel or disc, called a chakra, in his hands. When whirled by Vishnu, the chakra has a sharp edge, and irresistible fire flames from its periphery. Two other attributes appertain generally to Vishnu. Vishnu, regarded as time, corresponds with the Horus of Egypt. The legends of his sleeping, awaking, and turning on his side, evidently allude to the sun at the solstices; also to the phenomena of the overflow and receding of the Ganges, so similar to that of the Nile in Egypt. On the 11th day (sometimes on the 14th, which is the day of the full moon) of the bright half of the lunar month Kartica, Vishnu is fabled to arise from his slumber of four months. A festival is held in honour of this day, and at an auspicious moment, astrologically determined, Vishnu is awakened by this incantation or mantra: 'The clouds are dispersed, the full moon will appear in perfect brightness, and I come in hope of acquiring purity to offer thee fresh flowers of the season; awake from thy long slumber, awake! lord of worlds.' This god is usually represented of a black or blue colour, with four arms, in which he holds a club, to show that he punishes the wicked; the chank or wreathed shell, blown on days of rejoicing, and at periods of worship; the chakra or discus, the emblem of his universal domination; and the lotus or water-lily, the type of his creative power. He is sometimes described seated on a throne of the sacred lotus, with his favourite wife Lakshmi in his arms, or standing on a lotus pedestal between his two wives, Lakshmi and Satyavama; at others, reclining on a leaf of that flower, or on the serpent Ananta or eternity, floating on the surface of the primeval waters, or riding on garuda, his celestial vahan or vehicle, which is represented as a youth with the wings and beak of a bird.

His successive avatars are now regarded as—

1. Matsya or fish.	6. Parasu Rama.
2. Kurma or tortoise.	7. Rama Chandra.
3. Varaha or boar.	8. Krishna.
4. Narasinha or man lion.	9. Buddha.
5. Vamana or dwarf.	10. Kalki or white horse.

These avatars are generally received, but the designations have not always been similarly described. In the Mahabharata the ten are thus—

1. Hansa or swan.	6. Vamana or dwarf.
2. Kurma or tortoise.	7. Parasu Rama.
3. Matsya or fish.	8. Rama.
4. Varaha or boar.	9. Satvat.
5. Narasinha or man lion.	10. Kalki.

The Bhagavat Purana enumerates 22 avatars of Vishnu, amongst them Prithu, Dhanwantari, and Kapila. Other Hindu writings have 24 avatars.

One of the various incarnations of this deity is mentioned in an ancient legend relating to the destruction of the city of Mahabalipuram, or the Seven Pagodas, on the coast of Coromandel, by an earthquake and inundation during an early period of Hindu history. It is stated that 'Hirinacheren, a gigantic prince or demon, rolled up the earth

into a shapeless mass, and carried it down to the abyss, whither Vishnu followed him in the shape of a boar, killed him with his tusk, and replaced the earth in its original position.' A large portion of the magnificent ruins of that city and pagodas is now covered by the sea; other parts of them (the sculpture of which is still in many places very little injured by the lapse of ages or the effect of the elements) extend over a space of several miles. One of the cavern temples, now used as a place of worship, is said to contain a fine figure of Vishnu in the Varaha avatar.

In the Rama avatar, Vishnu appears in the person of a courageous and virtuous prince, the son of the puissant sovereign of Hindustan (capital, Ayodhya), to punish a monstrous giant, Ravana, who then reigned over Lanka, or the island of Ceylon. The Grecians had their Homer to render imperishable the fame acquired by their glorious combats in the Trojan war; the Latins had Virgil to sing the prowess of Æneas; and the Hindus have had their Valmiki to immortalize the martial deeds of Rama and his army of monkeys in subduing the giant Ravana and his hosts of many-headed monsters. The Ramayana, one of the finest epic poems (in spite of its many extravagances) extant, beautifully describes the incidents of Rama's life, and the exploits of the contending foes. Rama, whose fame is thus celebrated, is, in the pictorial representations of him, usually described as a green man, seated beneath an umbrella, the emblem of sovereignty, on a throne. A quiver of arrows hangs at his back; in one hand he holds his destructive bow, and in the other a flower of the sacred lotus. By his side is placed Sita, who is depicted as a goddess of transcendent beauty, of a deep yellow complexion.

The second of Vishnu's ten grand avatara or incarnations was in the form of a tortoise, and hence called the Kurma avatara, the principal incident in which was churning the ocean with the mountain Mandara, the huge serpent Sesha serving as a rope to whirl the mountain round withal, and Vishnu, in the shape of a tortoise, sustained the vast load. The result was fourteen precious articles, called gems or Chaoda ratni (more classically Chatur desa ratna), and one of the fourteen was poison; but

'To soften human ills, dread Siva drank
The poisonous flood that stained his asure neck.'

Whence the epithet Nilakantha or blue-throated is a name of Siva, and with the Saiva sect now not an uncommon name of men.

In the eighth avatara, Vishnu is said by his sectaries to have manifested himself in a degree of power and glory far exceeding any other of his forms, in which he assumed only an ansa or portion of his divinity, while Krishna was Vishnu himself in mortal mould. Other tribes of Hindus call Krishna an impious wretch, a merciless tyrant, an incarnate demon, now expiating his crimes in hell. In the Bhagavata it is mentioned that his votaries say that in this, as in his former descents on the earth, the object of Vishnu's appearance had been the destruction of giants, and the overthrow of oppressive and irreligious kings. The Bhagavata relates that Krishna's mortal parents were Vasu-deva (meaning the giver of wealth) and Devaki. It mentions a miraculous escape of the infant over the Yamuna conveyed by his father, and protected by Sesha or immortality. The guards placed by Kansa over his pregnant sister having failed in their vigilance, Kansa, enraged, ordered all newly-born infants to be slain; but Krishna escaped his various snares, one of which was sending a woman named Patnia with a poisoned nipple to nurse him, and he was fostered by an honest herdsman, named Ananda or Happy.

The Vaishnava sect regard Vishnu as the Supreme. It is related in the Skanda Purana, that when the whole earth was covered with water, and Vishnu lay asleep on the bosom of Devi, a lotus arose from his navel, and its ascending flower soon reached the surface of the flood; that Brahma sprang from the flower, and, looking around without seeing any creature on the boundless expanse, he imagined himself the first born.

But the Vaishnava sect of the present day, though nominally worshippers of Vishnu, are in fact votaries of deified heroes. The Goculast'ha (one branch of this sect) adore Krishna, while the Ramanuj worship Rama Chandra. Both have again branched into three sects, one of which, the exclusive worshippers of Krishna, are deemed the only true and orthodox Vaishnava; another joins his favourite Radha with the hero; a third, called Radha-Vallabhi, adores Radha only, considering her as the active power of Vishnu. The followers of these last-mentioned sects are said to present to their own wives the oblations intended for the goddess, and those among them who follow the left-handed path are said to require their wives to be naked when attending them at their devotions. Among the Ramanuj some worship Rama only; and others, both Rama and Sita; and they all, like the Goculast'ha, as well as the followers of the Bhagavata, delineate on their foreheads a double upright line with chalk or with sandal wood, and a red circlet with red sanders wood or with turmeric and lime; but the Ramanuj add an upright red line in the middle of the double white one.

Vaishnava Sects.

1. Ramanuja or Sri Sampradaya or Sri Vaishnava.
2. Ramanandi, Ramawat.
3. Kabir Panthi.
4. Khaki.
5. Maluk Dasi.
6. Dadhu Panthi.
7. Raya Dasi.
8. Senai.
9. Vallabhachari or Rudra Sampradayi.
10. Mira Bai.
11. Madhavachari or Brahma Sampradayi.
12. Nimawat or Sanakadi Sampradayi.
13. Vaishnava of Bengal.
14. Radha Vallabhi.
15. Sakhi Bhava.
16. Charan Dasi.
17. Harischandi.
18. Sadhua Panthi.
19. Madhavi.
20. Sanayasi, Vairagi, and Naga.

Saiva Sects.

1. Dandi and Dasnami.
2. Jogi.
3. Jungama.
4. Paramahansa.
5. Urdhaba'hu, Akas-Muk'hi, and Nak'hi.
6. Gudara.
7. Ruk'hara, Suk'hara, and Uk'hara.
8. Kara Lingi.
9. Sanyasi.

Sakta Sects.

1. Dakshini.
2. Vámi.
3. Kancheliya.
4. Kararia.

Miscellaneous Sects.

1. Ganupatya.
2. Samapatya.
3. Nanik Shahi, of seven classes, viz.—
   - *a.* Udasi.
   - *b.* Ganjbakhshi.
   - *c.* Ramrayi.
   - *d.* Suthra Shahi.
   - *e.* Govind Sinhi.
   - *f.* Nirmala.
   - *g.* Naga.
4. Jaina, of two principal orders—
   - *a.* Digambara.
   - *b.* Swetambara.
5. Baba Lali.
6. Pran Nathi.
7. Sadh.
8. Satnami.
9. Siva Narayini.
10. Sunyabadi.

Amongst other sectarians we have—

Aghori.	Bhakta.	Saurapata or
Avadhuta.	Brahmachari.	Saura.

The following are towns with celebrated Vaishnava temples :—

Tirupati (N. Arcot), Vencata Rama.
Conjeveram (Chingleput), Vurda Raja.
Triplicane (Madras), Parthasardy.
Seringham (Trichy), Runga Naika.
Seringapatam (Mysore), Runga Naika.
Sevasumudrum (Mysore), Runga Naika.
Malcotta (Mysore), Chellapilla Roya.
Therunarrayanapurum (Mysore), Yoga Narasimha.
Nursepurum (Mysore), Narasimha.
Near Guntur, Panka Narasimha.
Bilegory Rungan Hill (Mysore), Billegori Runga.
Mondepollum (Coimbatore), Vencata Rama.
Sutheagal (Coimbatore), Guni Ramasawmy.
Striparamathur (Chingleput), Odayavur.
Tinanore (Chingleput), Baktha Vatchalasawmy.
Teruvellore (Chingleput), Viraragavu.
Chicacole (Ganjam), Chicacolusawmy.
Buthrachella (Ceded Districts), Rama.
Terupagudul (Chingleput).
Carur (Coimbatore), Thauthony Vencataramen.
Uduppy (S. Canara), Krishna.
Ulamalu Mungapurum (N. Arcot), Ulamalumunga.

Other localities famed for incarnations of Vishnu are—Ahabulum, Algherry, Anuntasainum, Bhudradry, Ghuteka Chellum, Janarthanum, Kovilady, Kristampet, Mylapur, Pundrapurum, Simhaudry, Srisailum, Strevullyputtur, Strivycuntum, Thenkasi, Tirmambur, Tirvuttur, Triputur, Virarymuly.

Obscenities disfigure many of the Vaishnava temples all over India, and at Khajurabo in Bundelkhand is a Saiva temple with gross obscenities.

Ashadi Ekadasi is the 11th of the light half of the month Ashad, and is dedicated to Vishnu. It falls about the 12th July, and refers to the summer solstice, and on this feast day commences the night of the god, during which he reposes for four months on the serpent Sesha.

The Battia are a Hindu sect who worship Vishnu and his incarnation as Balaji at Panderpur and Tripatty. They have a great reverence for their guru, whom they style maharaj, and place at his disposal tan, man, dhan, body, mind, and means; and recently in Bombay, scandalous immoralities, owing to their carelessness of their women, were shown. They are generally merchants.

Amongst the Vaishnava, Bhakta or Bhagat is now usually applied to a puritan or individual more devout than his neighbours. The Bhakta formerly were a sect who worshipped Vishnu as Vasu-deva, and the Bhakta Mala is a work in which is embodied the legendary history of all the most celebrated Bhakta or devotees of the Vaishnava order. It was originally written in a Hindi dialect, by Nabha Ji, about A.D. 1580, but was added to by Narayan Das, who probably wrote in the reign of Shah Jahan. This, termed the Mala, was added to in A.D. 1713 by Krishna Das, the additions being named the Tika. The sacrificial offerings to Vishnu are rice, flowers, curds, fruits. To Siva and Durga, the objects offered in sacrifice are goats, sheep, and buffaloes.

The tulsi plant is typical of a nymph beloved by Vishnu. The Chatanula, according to Wilson, are a class of Sudra who worship Vishnu exclusively, and whose occupation is the sale of flowers; this seems to be the sect known in the Peninsula as the Satani or Sataniwanlu.

The Ananta-chaturdasi is a Hindu festival in honour of Vishnu.

The Bairagi or Viragi, meaning devoid of passion, are Hindu ascetic devotees, worshippers of Vishnu. In the south of India, Vishnu is considered by the Vaishnava to be the supreme being or the masculine power of the Parabaravastu, and he is one of the mummurti or triad.

The Banya race largely worship Vishnu, who is adored in some places as the four-armed, and is placed upon an altar clad in robes of his favourite colour (pandu or yellow ochre), whence one of his titles, Pandurang. At the intervals of the minor destructions of the world, Vishnu is represented as having reposed himself upon the serpent Sesha, amidst the waters by which the earth is overspread. He also sleeps for four months, from the 11th of Asharha to the 11th of Kartik, or from about the middle of June to the middle of October, or from the time the periodical rains usually commence till their termination. Vykuntha is the seat of Vishnu, the heaven which he quitted to assume the incarnate form of Rama. There sits the preserver of the world, enthroned with his consort Lakshmi, attended by Hanuman, Garuda, and watched by Drüve, the north star, the keeper of his royal gate. Nothing has yet turned up to give a clue for ascertaining the age in which Vaishnavism first originated. The most authentic fact of its earliest existence on record is furnished by the inscription on the iron pillar at Dehli, stating raja Dhava, who put up that pillar in A.D. 319, to have been a worshipper of Vishnu. The next fact is supplied by Fa Hian, who saw the Vishnupod at Gaya in the beginning of the 5th century. Vishnu worship is said to have been instituted at Kanchi in the Carnatic by Luchmanacharya, but it must have been by a learned Brahman either of Rajputana or Gujerat, places famous for the life and acts of Krishna, that Vaishnavism was modified to introduce the worship of that incarnation. The great textbook of the Vishnuvites, Streemut Bhagavat, is supposed to be the work of Bopdeva, a grammarian who lived in the court of the raja of Deoghur in the middle of the 12th century.

In Vaishnava Hinduism there are five stages of faith. The first and lowest is simply contemplative, like that of the rishis Sanaka and Yogendro; the second is servile, like that of men generally; the third is friendly, like the feeling with which Sreedama and the Gopin regarded Krishna; the fourth is maternal, paternal, or filial, like that of Jushoda, Devaki, etc; the fifth and highest is amorous or loving, like that of Radha.

From some cause or other, the worship of Vishnu declined in Bengal, but it was modified and revived in the 15th century by a celebrated religious teacher named Chaitanya. This eminent personage succeeded in reforming many religious and social abuses, and founded a sect of all classes without any distinction of caste; and in so doing continued the great work of Jayadeva, which was commenced about a century previously. The Banya race of Bengal chiefly belong to the sect of Chaitanya, and acknowledge him an incarnation of Krishna, without, however, adopting any of those ascetic habits which distinguish many of the Vaishnava. The lay followers of Chaitanya are merely initiated in the mantra or invocation to the deity by their religious preceptors, who are

called gosains. These gosains are followers of Nityananda, the coadjutor of Chaitanya; and it was to this Nityananda that Chaitanya entrusted the task of spreading his religion after his retirement from his spiritual labours. Up to the beginning of the 19th century, the gosain were held in great veneration, but since then, in Bengal, they receive little respect excepting from Hindu females, being regarded amongst the more enlightened Hindu community as the main preservers of superstitious ideas and usages. The gosain are otherwise called guru, and as such are hereditary preceptors in a family. The utmost respect that is paid to the Bengali gosain by their followers consists in taking and kissing the dust of their feet; but the younger females are not permitted to appear before them, and no scandals have arisen in the community like those which, about the year 1867, obtained such unhappy notoriety in the Bombay Presidency.

Throughout Bengal, Nuddea is celebrated as the great seat of Hindu learning and orthodoxy, the most sacred place of Hindu retreat. The Chaitanya Bhagavat states: 'No place on earth is equal to Nuddea, because Chaitanya was there incarnated. No one can tell the wealth of Nuddea. If people read in Nuddea, they find the rās of learning, and the number of students is innumerable.' The brightest epoch in the history of Nuddea, however, dates from the era of Chaitanya. Regarded by his adversaries as a heresiarch, worshipped by his followers as an incarnation, he is now truly appreciated by the discerning generation of the 19th century as a reformer whose efforts produced a little good. The consort of Vishnu is Lakshmi, Padma, or Sri.—*Wilson's Hindu Sects; Wilson's Glossary; Travels of a Hindu; Coleman; Moor.*

VISHNU, a Hindu philosopher mentioned in the Padma Purana, born at Ekamra Kanana in Orissa, who lived at Kamagiri. His doctrines were substantially those of Vyasa. He wrote one of the Smṛiti and a book on Pushkara.

VISHNU-BALI, a sacrifice to Vishnu on the 7th month; a Hindu domestic ceremony for an enceinte woman.

VISHNU BHAKTA, a worshipper of Vishnu, more especially as Rama Chandra or as Krishna. This Vaishnava sect in the Mahratta Dekhan worship Vishnu under the names Panduranga and Vithoba.

VISHNUGUPTA DRAMILA, the Muni Chanakya who raised Chandragupta Maurya to the throne.

VISHNU-MUNDIRU is a flat-roofed building having one room, with a portico in front, erected either within or without the wall which encloses a Hindu house, or at a little distance from the owner's house.—*Ward's Hindoos*, ii. p. 3.

VISHNU PURANA, a religious book of the Hindus. It has less than 7000 stanzas in six books. It treats of five specified topics,—primary creation, secondary creation, Sarga, Pratisarga, genealogies of gods and patriarchs, reigns of the Menu, history. It was translated by Professor Wilson, and a second edition by Dr. F. Hall. The course of the elementary creation in all the Puranas is taken from the Sankhya philosophy. In the primitive dogmas of the Hindus, the distinctness of the deity and his works are enunciated. But the Vishnu Purana declares Vishnu to be Purusha or spirit, Pradhana or crude matter, Vyakta or visible form, and Kala or time. The Vishnu Purana is supposed by Professor Wilson to have been possibly written about A.D. 1045, in the Kali year 4146. The fourth book contains all that the Hindus possess of their ancient history. It is a tolerably comprehensive list of dynasties and individuals, but is a barren record of events. It can scarcely be doubted, however, but that much of it is a genuine chronicle of persons, if not of occurrences. The Veda, the Purana, and other works forming the body of Sanskrit literature, are all named; and so is the Mahabharata, to which therefore it is subsequent. Both Buddhists and Jains are adverted to. It was therefore written before the former had disappeared; but they existed in some parts of British India as late as the twelfth century at least, and it is probable that the Purana was compiled before that period. It is discredited by palpable absurdities in regard to the longevity of the princes of the earlier dynasties, and the particulars preserved of some of them are trivial and fabulous. Still there is an inartificial simplicity and consistency in the succession of persons, and it is not essential to its credibility or its usefulness that any exact chronological adjustment of its different reigns should be attempted. Deducting, however, from the larger number of princes a considerable proportion, there is nothing to shock probability in supposing that the Hindu dynasties and their ramifications were spread through an interval of about twelve centuries anterior to the war of the Mahabharata, and conjecturing that event to have occurred about fourteen centuries B.C., the commencement of the regal dynasties of India is thus carried to about 2600 years before that date. After the date of the great war, the Vishnu Purana, in common with those Puranas which contain similar lists, specifies kings and dynasties with greater precision, and offers political and chronological particulars, to which, on the score of probability, there is nothing to object.—*Professor Wilson*, pp. 64, 70, 71, *quoted in Thomas' Prinsep*, p. 235; *Dowson; Garrett.*

VISHNU-RATHA, the car of Vishnu. This is Garuda or Guruda, an eagle, now personified as a winged man.

VISHNU-SMRITI, also known as Vishnu-Sutra and Vaishnava Dharma-Sastra, a law book of the Hindus. It was translated by Julius Jolly, and printed as the seventh volume of the Sacred Books of the East.

VISHU SANKRANTI or Vishu Sankramanam, the sun's entrance into either of the equinoctial signs.

VISISHT'HA-DWAITA, a system of philosophy, founded by the Vaishnava reformer Ramanuja. See Sri Sampradaya.

VISS, a weight of the Peninsula of India of 3 lbs. 3 oz.

VISVA-DEVA. SANSK. A class of Hindu deities to whom sacrifices are daily offered; lit. all the gods.

VISVAKARMA, in Hindu mythology, one of the gods, son of Vasu Prabhasa, and his wife the lovely and virtuous Yogasiddha. He has several names, Deva, Karu, Sudhanwan, Takshaka, and Vardhika. He is the architect of the universe, the fabricator of arms to the gods, and presides over the arts, manufactures, etc. In paintings,

he is represented as a white man with three eyes, holding a club in his right hand. Some of the most grand and beautiful of the cave temples at Ellora, Nasik, etc., bear the name of this god. One at Ellora is hewn one hundred and thirty feet in depth out of the solid rock, presenting the appearance of a magnificent vaulted chapel supported by ranges of octangular columns, and adorned by sculptures of beautiful and perfect workmanship. In the sculptured representations of this deity, he is shown in a sitting posture, with his legs perpendicular, and holding with the fingers of one hand the forefinger of the other. Sir W. Jones considers Visvakarma to be the Vulcan of the Greeks and Romans, being, like Vulcan, the forger of arms for the gods, and inventor of the Agnyastra, or fire shaft, in the war between them and the Daitya or Titans. The Visvakarma cave at Ellora is a chaitya. Its age about A.D. 600.—*As. Res.* i. p. 264.

VISVAMITRA, a Kshatriya prince of the Lunar dynasty, who claimed the right to perform a great public sacrifice, and established his claim. He was opposed by Vasishta, who claimed that to be a province of the Brahmans only. Visvamitra was the son of Gadhi or Gathin (of the race of Kausika), king of Gadhipura, and contemporary of Umbareesha, king of Ayodhya or Oudh, the fortieth prince from Ikshwaku, consequently about two hundred years anterior to Rama, and probably about one thousand four hundred years before Christ. He is mentioned in the Rig Veda, Ramayana, and Mahabharata. He is author of one of the Smriti and of a book in praise of Jwala-Mukhi. He taught that the will and decrees of God are irresistible. There are many legends about him, but all of them relate to the success of his efforts to repress the ambitious strivings of the Brahmans, led by Vasishta. According to the Ramayana, he was the fourth from Prajapati, but the Bhagavat makes him the fifteenth from Brahma. They agree in calling him the son of Gadhi, who, according to the first, was the son of Kusanabha, and, according to the second, the son of Kusamba. Visvamitra was sovereign of Kanouj, and, according to the legend, engaged in war with the sage Vasishta for the possession of Surabhi, the all-bestowing cow. In this contest the cow produced all sorts of forces, particularly M'hlecha, or Barbarians, by whose aid Vasishta overcame his adversary. There can be little doubt that this legend is an allegorical account of a real transaction, and that by the cow we are to understand India, or the most valuable portion of it, possibly the valley of the Ganges, for the sovereignty of which either two princes or two tribes, the Brahmans and Kshatriyas, contended. One of the parties, calling to their aid the aborigines, the Persians, and not impossibly the Greeks, triumphed by their means. There are other obscure legends. —*Calc. Rev.*; *Ramayana*, i. sect. 41–53; *Mahabharata*, *Adi Parva*; *Bhagavat*, ix. 15; *Ward*, iv. p. 42.

VISVESVARA, a form of Siva worshipped at Benares.

VISWANADA, a Tamil author of the middle of the 19th century, who distinguished himself as a playwright, and whose death was a great blow both to the Brahmo cause and the theatre. His plays are exceedingly popular, and are in no sense copies of the Sanskrit productions. That which is esteemed the finest is called the Tahsildar Natakam. The word Natakam means a drama, and the whole title fitly introduces the piece, which is a satirical comedy, intended to rebuke and expose a tahsildar who obtains the favour of and promotion from the collector by aping European customs,—who wears boots, drinks beer and brandy-pegs, rides horses, swears loudly, professes the utmost contempt for native prejudices, but is withal a confirmed scoundrel. He takes bribes, oppresses the poor, persecutes his enemies, sets up a haram, gathers money by every means fair and foul, and then scatters it in coarse pleasures and brutal riot. Such is the man that Kasi Viswanada Mudelliar undertook to flagellate, and seldom has the lash been laid on more smartly. Of course in the end the villain hero comes to most irremediable grief, to the confounding of his imitators and the outrageous joy of the people. The play, wherever performed, gains all the aid of local feeling. Its hero is always identified with Tahsildar this, Deputy-Collector that, or Police-Inspector the other. Hence unfailing crowds always rush to its performance. The play styled Dumbachari Vilasam, or the Story of a Spendthrift, in Madras is almost as popular as the Tahsildar Natakam. The hero is truly identified with a person who rushed by native society a few years since with all the glory and sputter of a rocket, but who afterwards lived in well-deserved obscurity

VISWANATHA. Sansk. Lord of all; a name of Siva.

VISWA-NATHA, author of the Sahitya-darpana, also of the Raghava-vilasa.

VITASTA, the Jhelum or Hydaspes or Behut.

VITEX, a genus of plants belonging to the natural order Vitaceæ, the vine tribe. The species known to occur in India are—V. agnuscastus, alata, altissima, arborea, haynga, heterophylla, incisa, leucoxylon, negundo, peduncularis, pubescens, saligna, trifolia. One species, a native of Kaghan, and called Bankahu, has a wood used for making large dishes. Another, Kjeyoh, Burm., furnishes one of the woods of Burma, used for tool-handles, and much prized; a cubic foot weighs 45 lbs. The ancients considered the Vitex anti-aphrodisiac; the berries, from their warm aromatic taste, must be possessed of stimulant properties. Vitex agnuscastus, a native of the south of Europe, is the longest known species; in the month of February, in the tropical region below Darjeeling, it grows in profusion by the road-side, and the air is scented with its white blossoms. It forms a shrub of about 12 feet in height. The flowers are arranged in spiked whorls. The fruit is globular, rather smaller than black pepper, with an acrid and aromatic taste, whence it is called Petit Poivre Sauvage in the south of France. The seeds are inodorous when entire, but when bruised their odour is acrid and disagreeable, the taste acrid and pepperish, very persistent. They are very rich in essential oil, and possess powerful stimulating properties. At Smyrna the powder strewed over sliced onion and applied to the stomach is deemed a certain remedy in colic. In India the fruits of V. triphylla and V. negundo have the same properties ascribed to them, and are called Filfil Burree (large pepper). — *Rohde*, *MSS.*; *Hooker*, *H. Jour.* p. 374; *O'Sh.* p. 485.

VITEX ALATA. *Roxb.* Mel-elow, Maleal.

A small tree found in the Nagari Hills; leaves ternate, petioles winged. It occurs in the Bombay Presidency, but is rare. Both it and V. leucoxylon have a white compact wood, apparently good for turning, as well as for cabinet-work. Its leaves and bark are used in medicine.—*M. E. J. R.; Drs. Cleghorn and Gibson.*

VITEX ALTISSIMA. *Linn.*

Myrole, ... CAN.	Mililla-gass, . . SINGH.
Katu mellau mara, MAL.	Kat miella maram, TAM.
Meeyan mililla-gass, SING.	

This tall chaste tree, in Ceylon, is common in forests, up to an elevation of 3000 feet. In Coimbatore it is a large tree, of great beauty when in flower, and frequent on the slopes of the Western Ghats. The timber was reported to Dr. Wight as fit for cabinet purposes; but Dr. Gibson says he is not sure as to the species which Dr. Wight had in his eye when he remarked on this. In Ceylon, this tree produces one of the most valuable timbers in the island for building and other purposes; very hard, fine, close-grained, and heavy. —*Thw. En. Pl. Zeyl.* p. 144; *Drs. Wight, Cleghorn, and Gibson; M. E. J. R.; Mr. Mendis; Beddome.*

VITEX ARBOREA. *Roxb., Rheede.*

H'touk-sa, . . . BURM.	Busi, ... TEL.
Kattu mellalu, . MALEAL.	Nawel busi eragu, . ,,
Kat miella, . . . TAM.	Neval adugu manu, ,,

This chaste tree is a native of the mountainous parts of the Circars, of the forests of the Godavery, at Courtallum, growing in Sylhet and Chittagong; very common at Moulmein, and found at Tavoy, Penang, and Singapore, flowering in the hot season, and the seed ripens during the rains. In the Circars and Chittagong it grows to be a very large tree, and at Moulmein it furnishes a valuable small timber. Its wood is hard, of a yellowish-brown colour, and when old is chocolate coloured, very hard and durable, which renders it useful for various ordinary purposes.—*Roxb.; Voigt; Beddome; Dr. Mason; Cal. Cat. Ex.*, 1862; *Rohde, MSS.; M. E. J. Reps.*, 1855, 1857.

VITEX INCISA. *Smith.* Man-king, CHIN. A shrub of Peh-chi-li, Shen-si, and Cheh-kiang. Its berries are given in catarrh.—*Smith.*

VITEX LEUCOXYLON. *Roxb.*

Karril, . . . MALEAL. | Neva-ledi, ... TEL.

A large tree, a native of the hotter parts of Ceylon, of both Peninsulas, Assam, and the mountains of Chittagong, not uncommon by the edges of streams in the South Konkan, and the ghat jungles of the Bombay Presidency, very common in the plains of British Burma; wood grey, deserves attention for furniture, used for cart-wheels. A cubic foot weighs 42 lbs., and average girth measured at 6 feet from the ground is 12 feet. It sells at 8 annas per cubic foot. It flowers in April.—*Thwaites; Voigt; Gibson; Brandis; Cal. Cat. Ex. of* 1862; *Rohde, MSS.*

VITEX LITTORALIS is the Puriri or oak or teak or iron-wood timber tree of New Zealand, known as the Kauwere. It grows to the height of 25 to 30 feet, and 12 to 18 feet in circumference. It is hard and very durable timber, yellow when young, but dark-brown in full-grown trees.

VITEX NEGUNDO. *Linn.*

Vitex paniculata, *Lam.*

Fenjengisht, . . ARAB.	Bimra, . . . CHENAB.
Sanake, ... BEAS.	Shumbali, . . . DUKH.
Nergundi, . . . BENG.	5-leaved chaste tree, ENG.
Ban-kahu, . . HAZARA.	Sindhuka, . . . SANSK.
Sembhalu, . . . ,,	Sudu nikka, . . SINGH.
Nisinda, . . . HIND.	Shwari, ... SUTLEJ.
Tor banna, . . JHELUM.	Vella nuchi, . . TAM.
Inoram, Marwan, ,,	Veyala, ... TEL.
Ban nuchi, . . MALEAL.	Wayalaku, . . . ,,
Banna, ... PANJ.	Wyala, ... ,,
Marwande, . . PUSHTU.	Nalla vavali, . . . ,,
Marwa, . . SALT RANGE.	

A shrub or small tree, common in Ceylon on the banks of rivers up to 3000 feet, in the Peninsula of India, Bengal, the Dehra Doon, and the Moluccas; common in the Siwalik, tract and up to 3500 feet in the outer hills, and occasional in the Salt Range and out in the plains. The branches are used for wattle-work in Chumba. The leaves are given for colic, and used in poultices; also, the warm leaves are a useful application in rheumatism or sprains; and the Muhammadans are in the habit of smoking the dried leaves in cases of headache and catarrh. The root and fruit likewise are officinal; a decoction of the aromatic leaves is used as a warm bath for women after delivery. In medicinal qualities it is similar to, but weaker than, V. agnuscastus. The decoction of the root is a pleasant bitter, and is given in cases of intermittent fever. Fruit considered vermifuge in Behar.—*Roxb.; Voigt; Thw.; Cleg.; Stewart; O'Sh.*

VITEX TRIFOLIA. *Linn.* Indian prenet.

Kyoung ban, . . BURM.	Kara nuchi, . . MALEAL.
Nirgunda, . . . DUKH.	Jela-nirghundi, . SANSK.
Pani ki shumbali, ,,	Sind'huka, . . ,,
Seduari, Nishinda, HIND.	Milile? . . . . SIND.
Lagondi, . . . MALAY.	Nir nuchi, . . . TAM.
Samalu sanbalu, . ,,	Vavili chettu, . . TEL.

The Indian prenet is a small tree found in Southern Asia, not uncommon near the sea in Ceylon, much cultivated by the Burmans; it bears a little but pretty blue flower. Both leaves and flowers are rather agreeably heavy scented. In the Dekhan it is a common shrub, generally to be met with growing in patches in moist places, appearing in April and May, but more or less throughout the year. Young shoots round and villous. Leaves slightly bitter, but of delightfully aromatic taste and smell, are deemed powerful external applications in rheumatism, sprains, etc. The powdered leaves are used in intermittent fevers. The fruit in powder is given usually in electuary or decoction, for amenorrhœa and several other diseases. The leaves are used to stuff pillows, to cure catarrh and headache. The flowers are prescribed in Behar with honey, in fevers attended with vomiting and much thirst. In the Panjab it is used in special diseases, and after parturition, also to produce appetite and increase the bile.—*Buchanan; Powell; Mendis; Thw.; Mason; Riddell; Sir William Jones; As. Res.* iv. p. 293; *Ainslie; O'Sh.*

VITHAL or Vithoba, a deified sage, who with his early expounders are largely worshipped in the western parts of the Dekhan and the South Mahratta country as local divinities. He is the popular deity in the temple at Panderpur, on the left bank of the Kistna river. He has been celebrated by Tuka Rama, a Mahratta poet.

VITIS, a genus of plants of the natural order Vitaceæ. Species growing in the East Indies are —V. adnata, angustifolia, auriculata, carnosa, cordata, elongata, glandulosa, glauca, Indica, lanata, lanceolaria, latifolia, muricata, Neilgherrensis, pallida, parviflora, pedata, pentagona,

quadrangularis, serrulata, setosa, vinifera. They are climbing plants, found in many parts of Asia, Europe, and America.

VITIS CARNOSA. *Wall., W. and A., W. Ic.*
Cissus carnosa, *Roxb.*

Kassar, ... HIND. | Mandula mari tigei, TEL.
Kani-apa tige, . . TEL. | Mekamettavi chettu, ,,

Common in hedges and forests in Bengal, and flowers in the rainy season. Remarkably acrid; roots used in native medicine.—*O'Sh.; Ell. Fl. And.*

VITIS INDICA. *Linn.* Vitis rugosa, *Wall.*
Amdhuka, BENG., HIND. | Shombra vulli, . MALEAL.

A wild, shrubby climbing plant in the plains of India, and not uncommon in hot jungles, even at a considerable distance from the foot of the mountains; common throughout the Dekhan and in the Tenasserim Provinces. This is seen creeping over every hedge and bush, and has sometimes been mistaken by Europeans for the true grape vine, but in the plains the fruit is acrid, like all the indigenous species, and not edible. In the Himalaya, however, it produces beautiful clusters of round purple berries and a large one, which is very fair eating. The origin of the common grape being unknown, it becomes a curious question to decide whether the Himalayan Vitis Indica is the wild state of that plant,—a hypothesis strengthened by the fact of Bacchus, etc., having come from the east. Dr. J. L. Stewart has not distinguished between V. Indica, V. lanata, and V. vinifera; he says V. lanata, with velvety, white or red backed leaves, appears to run into the glabrous-leaved wild one. In the N.W. Himalaya they are generally found at from 3000 to 6000 feet, and appear to give both purple and green fruit; and Dr. Thomson says that specimens of V. vinifera are scarcely distinguishable from V. Indica, *L.—Stewart; Thomson's Tr.* p. 345; *Hooker, H. J.* ii. p. 187; *Riddell; Mason.*

VITIS LATIFOLIA. *Roxb., W. and A., Rh.*

Govila, ... BENG. | Shumambu valli, MALEAL.
Vallia-pira-petica, CAN. | Bedisa tivva, . . . TEL.

Grows in Bengal and in the hills of Southern India, and is used in medicine.—*Roxb.* i. 661.

VITIS QUADRANGULARIS. *Wall.*
Cissus quadrangularis, *Roxb.*

Harjora, Hasjora, BENG. | Pirandi kodi, . . TAM.
Jangelam parinda, MAL. | Nalleru, ... TEL.
Perunda, ... TAM. | Nalla ratiga, . . ,,

A trailing and creeping plant with four-angled and winged stems, cultivated about villages; used by the natives as greens, and in the preparation of chatni. Berries acrid.—*Jaffrey.*

VITIS RACEMOSA. Wild grape, the Angur, Haljar, HIND. Used in the Panjab by zamindars as bunds or ties for their fences.

VITIS SETOSA. *Wall.* Cissus setosus, *Roxb.*

Puli-naravi, . . . TAM. | Bara butsali, . . . TEL.

Grows in the Peninsula, and is used as a medicine; is in all its parts excessively acrid, and the leaves toasted and oiled are applied to indolent tumours to bring them to suppuration.—*Roxb.*

VITIS VINIFERA. *Linn.*

Kerm (vine), . . . ARAB. | Dips, Dibs, . . . EGYPT.
Draksha, BENG., SANSK. | Angur, ... HIND.
Dakhi, Dehla, . CHENAB. | Lanang, . . . KAGHAN.

The common vine or grape vine is largely cultivated all over the world, from near lat. 55° N. to the equator, but in south latitudes it only extends as far south as 40°. In middle Germany it ceases from about 1000 to 1500 feet above the level of the sea. On the south side of the Alps it reaches 2000 feet; in the Apennines and Sicily, 5000 feet; and on the Himalaya as high as 10,000 feet above the level of the sea. Although the maximum of summer heat is as great at Moscow as in Paris, yet the vine will not ripen its fruit in the former place; for although the greatest heat of the months of June and July are as high as that of Paris, the months of August and September are several degrees below. England, also, has a mean temperature as high as many parts of the world where the vine flourishes in the greatest perfection; but although England is warmer than these countries in the winter, it is not so warm in the months of September and October, at which time the vine is ripening its fruit. There can be little doubt of its being indigenous in the east, in the district between the Black and Caspian Seas. In the forests of Mingrelia and Imiretia it flourishes in all its magnificence, climbing to the tops of the highest trees, and bearing bunches of fruit of delicious flavour. In these districts no cultivation of the vine exists, and the inhabitants seldom harvest the abundance of fruit that is produced. In many spots in France, Germany, Portugal, and Italy, the vine is found wild, but the fruit is very generally of an inferior kind, and it may be doubted whether it is truly indigenous in any part of Europe.

From its innumerable varieties, affected by different climates and soils, we have, besides grapes yielding the various wines of commerce, other sorts, which are dried, forming the raisins Valentia, muscatel, and sultana (without seeds, from Turkey), also currants, the dried fruit of a small-fruited variety of the grape vine (*var.* Corinthiaca), cultivated in the Ionian Islands, Greece, Liparis, etc.

In the Dekhan, the plants are reared from slips taken at the time of first cutting after the rains, and when ready to be removed are put about 7 or 8 feet apart. They are for the first 12 months trained on dry sticks; after that, a large straight branch of the pangrah, Erythrina Indica, with a fork left at the top to support the vine, is placed about 12 inches from it; if put at a greater distance it is apt to give a bend to the vine which is hurtful. The vine cannot be too straight, and the length of the prop should be about 5 feet. The fruit is cultivated in the greatest perfection in all parts of the Dekhan, and the finest flavoured are found in the gardens in the neighbourhood of Dowlatabad. Its agreeable, sweet-acid flavour, when ripe, has always rendered it a very desirable food when fresh. Grapes are dried for raisins, and this is generally effected by cutting half through the fruit-stalk whilst they are suspended on the tree. The different kinds of raisins in use in India, called monuka, kishmish, and bedana, are brought chiefly from Istalik. The grapes of Kashmir are not equal to those of Kābul, possibly from the little trouble taken in rearing them. In many parts of the Panjab, the vine thrives quite as well as in Europe; it seems to be indigenous in Hazara, and possibly also in the Salt Range. Its tendency is to grow too luxuriantly, so that it all goes to wood and leaves, and this might probably be counteracted by proper cultivation and by choosing a poor, rocky soil, and

selecting suitable varieties of vine. It is found in the Sutlej valley between Rampur and Sungnam, at an elevation of 7000 to 9000 feet; but the grape is an uncertain crop. In Kanawar, a spirit prepared from the juice is compared to grape-brandy by Hoffmeister. This spirit is called by the usual Arabic term arrack, and a wine also (sheo) is made there. The circumstance that the Hindu name is applied to this and the barley-brandy of Lahoul, would seem to imply that the art of distillation has been introduced into these countries from below. In Afghanistan, Bellew states that a grape wine is prepared, which is consumed by well-to-do Muhammadans, and a raisin wine for Hindus.—*Roxb.; Wight; Voigt; Powell; Stewart; Cleghorn; O'Sh.; Royle, Him. Bot.; Riddell, Gardening; Mason's Tenasserim.* See Raisins.

VITRIOL, vitriolic acid, sulphuric acid, Acidum sulphuricum. Vitriol was once largely manufactured on the banks of the Sone, in Shahabad, from sulphate of iron, the product of the Kymore range. It is now only a native manufacture on a small scale.

VIVERRIDÆ, a family of carnivorous animals, whose place in the order may be thus shown :—

Sub-Fam. Viverrinæ, Civets.

Viverra civettina, *Blyth.*

V. Zibetha, *Water.* | Malabar civet-cat.

Found in the forests of the Western Ghats, and is destructive to poultry.

Viverra Indica, *Geof.*, the glossy genette, the civet of Europeans, is common in the northern province of Ceylon.—*Tennent's Ceylon*, p. 32.

Viverra Malaccensis, *Gm.*

V. Malaccensis, *Gmelin.*	V. Bengalensis, *Gray.*
V. rasse, *Horsfield.*	V. pallida, *Gray.*
V. gunda, *B. Ham. MSS.*	Genetta Manillensis,
V. Indica, *Geoffroy.*	*Eydoux.*
Katas, ... Beng.	Kasturi, ... Mahr.
Gando-gokul, . . ,,	Jowadi manjur, . ,,
Gando-gaula, . . ,,	Sayer, ... Nepal.
Punajin bek, . . Can.	Bug-nyul, . . . ,,
Musk-billi, . . Hind.	Punajin pilli, . . . Tel.

Found throughout India and the Archipelago. It lives in holes in the ground or under rocks. It can be quite domesticated. The Indian civet-cats secrete an odoriferous substance identical with civet, though not the civet of commerce. This species is not infrequently found in the Tenasserim villages, and its secretion enters into the Burmese materia medica.—*Blyth; Mason.*

Viverra tangalunga, *Gray*, inhabits the Malay Peninsula and the islands of the Archipelago as far east as the Philippines.

Viverra Zibetha, *Linn.*, Zibeth civet.

V. Zibetha, *Linn.*	V. melanurus, *Hodgson.*
V. Bengalensis, *Gray.*	V. orientalis, *Hodgson.*
V. undulata, *Gray.*	V. civettoides, *Hodgson.*
Gatt, . . Arab. of Dafur.	Kaukan, . . Ethiopia.
Katas, ... Beng.	Saphiong, . . Lepcha.
Mach-bhondar, . ,,	Mzouron, . . Negros.
Bagdos, ... ,,	Bhran, Nit biralu, Nepal.
Pudo-gaula, . . Bhot.	Kastor, . . N. Guinea.
Kung, ... ,,	Sawadu poni, . . . Tam.
Nzfusi, Nzime, . Congo.	

Inhabits Central and South-Eastern Asia. It is destructive to poultry and game. Civet is obtained from the sub-caudal gland of this animal, which is 2½ inches in diameter; and in some places the animal is kept in confinement, and the drug is collected periodically.—*Jerdon; Horsfield.*

Prionodon pardicolor, *Hodgson*, of S.E. Himalaya, Nepal, Sikkim.

Parodoxurus musanga, *Jerdon.*

P. typus, *F. Cuv., Ell.*	P. fasciatus, *Gray.*
P. Pallasii, *Gray.*	P. prehensilis, *Pallas.*
P. musangoides, *Gray.*	Viverra hermaphrodita,
P. Crossii, *Gray.*	*Pallas.*
P. dubius, *Gray.*	
Bhondar, . . . Beng.	Jhar ka kutta, . . Hind.
Kera-bek, . . . Can.	Ud, ... Mahr.
Toddy cat, . . . Eng.	Mara pilli, . . Maleal.
Menuri, ... Hind.	Manu-pilli, . . . Tel.
Lakati, Katas, . ,,	

Ceylon, India, Malayana, Burma.

Parodoxurus strictus, *Hodg.*

Qu. ? P. musanga, *var.* | P. quinque-lineatus, *Gray.*

Parodoxurus leuco-mystax, *Gray*, Malayan Peninsula and islands.

Parodoxurus quadriscriptus, *Hodg.* Qu. ? P. musanga, *var.*

Parodoxurus derbyanus, Malayan Peninsula and islands.

Parodoxurus Tytleri, *Tytler.* Qu. ? P. musanga, *var.* Andamans.

Parodoxurus trivirgatus, *Temm.*, Malayan Peninsula and islands.

Parodoxurus Grayii, *Benn.*, *Blyth.*

P. Nepalensis, *Hodgs.*	P. bondar, *Temm.*
P. auratus, *Blain.*	Hill tree-cat, . . . Eng.

Parodoxurus Zeylanicus, *Pallas*, Ceylon.

Parodoxurus bondar, *Gray.*

P. hirsutus, *Hodgson.*	P. Pennantii, *Gray, Hardw.*
Bondar, Baum, . . Beng.	Malwa, ... Nepal.
Terai tree-cat, . . Eng.	Machabba, . . . ,,
Chinghar, . . . Hind.	

Nepal Terai, Bengal, Behar.

Paguma laniger, *Gray* (Martes laniger, *Hodgson*), Tibet and snowy Himalaya.

Artictis binturing, *Jerdon.*

Ictides ater, *F. Cuv.*	Viverra binturong, *Raffles.*
Paradoxurus albifrons.	Black bear-cat, . . Eng.

Nepal, Assam.

Cynogale Bennettii, *Gray* (Potamphilus barbatus, *Kuhl.*), Malayan Peninsula.

Herpestes griseus, *Geoff., Blyth.*

H. pallidus, *Schinz.*	Mangusta mungoose, *Ell.*
Mungli, ... Can.	Newara, ... Hind.
Madras mungoose, . Eng.	Nyul, ... ,,
Koral, ... Gond.	Mangus, ... Mahr.
Newal, ... Hind.	Yentawa, . . . Tel.

Peninsula of India.

Herpestes Malaccensis, *F. Cuv., Blyth.*

H. nyula, *Hodgs.*	Calogale nyula, *Gray.*
Baji, Biji, . . . Beng.	Nyul, ... Hind.
Newal, ... Hind.	Newara, ... ,,

Bengal to Malayana.

Herpestes monticolus, *Ell.* (H. Jerdoni, *Gray.*), long-tailed mungoose, Konda yentawa, Tel., Eastern Ghats.

Herpestes fulvescens, *Kel.* (Onychogale Maccarthiæ, *Gray*), Ceylon.

Herpestes Smithii, *Gray, Blyth.*

H. rubiginosus, *Kelaart.*	Calictis Smithii, *Gray.*
H. Elliotti, *Blyth.*	Ruddy mungoose, . Eng.

Ceylon and S.E. of Peninsula.

Herpestes Nepalensis, *Gr., Blyth.*

H. auro-punctatus, *Hodg.* | H. pallipes, *Blyth.*

Afghanistan, Panjab, Lower Himalayas, Bengal, Assam, Burma, Malayana.

Herpestes Javanicus, Java and Malayana.

Herpestes thysanurus, *Wagner*, Kashmir.

Herpestes fuscus, *Waterh., Bl.*, Neilgherries.

Herpestes vitticollis, *Benn., Ell., Blyth* (Tœniogale vitticollis, *Gray*), W. Ghats, Neilgherries.
Herpestes brachiurus, Malayana.
Herpestes exilis, Eastern Archipelago.
Urva cancrivora, *Hodg., Blyth.*

Gulo urva, *Hodg.*	Osmetictis fusca, *Gray.*
Viverra fusca, *Gray.*	Crab mungoose, . ENG.

S.E. Himalaya, Assam, Arakan.

VIZAGAPATAM, a district of 18,344 square miles, population 2,485,141, in the Madras Presidency, lying between lat. 17° 14′ 30″ and 18° 58′ N., and between long. 82° 19′ and 83° 59′ E. A portion of the district forms part of the Northern Circars. It is a beautiful, picturesque, and hilly country, but in the greater part most unhealthy. To the west of the Eastern Ghats is situated the greater portion of the extensive zamindari of Jeypore, which is for the most part very hilly and jungly. The north and north-west of the district, which is chiefly inhabited by Kandh and Saura, is also mountainous. In the extreme north, a remarkable mass of hills, called the Neilgherries, rises to a height of 4972 feet above the sea, and these hills are separated by valleys of not more than 1200 feet from the neighbouring ranges of ghats. The present district of Vizagapatam formed, in the early days of Hindu history, a portion of the ancient kingdom of Kalinga. It was subsequently conquered by the eastern branch of the Chalukya dynasty. Wild tribes, mostly of Dravidian race, chiefly inhabit the hill country of Jeypore and the uplands which stretch through the district into Ganjam. Several castes of Aryans from Orissa and the plains of the Northern Circars have settled in this tract, among whom are a great many Uriya Brahmans. The zamindars are of the Kshatriya caste, and their retainers are Paiks, who have largely settled as cultivators. The aboriginal tribes consist of Kandh, Gond, Gadaba, and Koi. Where they have come into contact with Hindus, the cultivating Kandhs call themselves Praja (or rayats). They are thrifty, hard-working agriculturists, undisturbed by the intestine broils which agitate the more turbulent Kandhs of the north. They entertain an unconquerable love for their native soil, and regard themselves, and are regarded by the zamindars, as the owners of it. Other Dravidians are found in the extreme north of the district as Gond, farther south as Batia, Kondha Dora, Kondha Kapu (Telugu names signifying lords of the hills and cultivators), Matiya, and Koi. Their dialects are similar. The tribes who inhabit the more mountainous parts of the Jeypore country are more manly and civilised than the others, and when treated with respect soon throw off their wildness, and become hard-working members of society. The Kandhs formerly offered human sacrifices, which the British suppressed. Saura inhabit the hills and slopes behind Palkonda and to the east of Gunapur. Vizagapatam (Visakha-pattanam, 'city of Visakha,' *i.e.* Kartikeya or Subhramanya, the Hindu Mars) is the chief town of the district, in lat. 17° 41′ 50″ N., long. 83° 20′ 10″ E.—*Imp. Gaz.*

VIZIADRUG or Viziageriah is three miles S. of Rajapur, in lat. 16° 33′ 32″ N., and long. 73° 19′ 15″ E. The fort walls are strong. It was held by Angria, and was bombarded and taken in 1775 by Admiral Watson and Clive.

VIZIANAGRAM, one of the most ancient and extensive estates or zamindaris in India, included in Vizagapatam district. It has plumbago, manganese, garnets, iron-ore. The town of Vizianagram, in lat. 18° 2′ N., and long. 83° 32′ E., is 15 miles from the sea.—*Imp. Gaz.*

VODDU or Woddu, CAN., used for catching fish, is like a large hurdle, and is frequently thrown across a stream as large as the Thames at Richmond. The Coorg race annually place woddu at the heads of the Canara rivers to catch the fish returning from spawning.

VOHORO, Wohoro, or Ohoro, properly Bohra, of Gujerat and the west of India, are traders, shopkeepers, and bankers. They are of two sections, Sulimani and Dawdi.—*Wils.*

VOIGT, C. J., author of Hortus Suburbanus Calcuttensis, published at Calcutta in 1845.

VOITURNA, the Styx of the Hindus; the river Byturni.

VOLCANOES. In the south-west of Asia, south of the Hellespont, the mountains surrounding the plains of Troy present many traces of older volcanic action, and there are a string of volcanic islands in the Ægean Archipelago. Farther south is the great crater of Santorini, formed in a prehistoric age, with islands which were produced by eruptions in 1573 and 1707.

Eastward of these, in Asia Minor, the lofty Hassan Dagh rises from an elevated table-land to 8000 feet above the sea. At its base are several cinder cones that have given vent to streams of black vesicular lava which have flowed into the plain.

From Erzerum to Kars, and thence to Tiflis and Erivan,—indeed, through almost the entire space south of the Caucasus separating the eastern coast of the Black Sea from the Caspian, as well as the country surrounding the lakes Van and Ourmia,—volcanic formations predominate. In these countries six principal 'volcanic amphitheatres' have been described by M. Du Bois de Mont Pereux, viz. 1. That of Akaltsiké, reaching from Poti on the Black Sea eastwards to the sources of the Kour river; 2. That surrounding the Lake Sevan; 3. That of Armenia, including the Great and Lesser Ararat; 4. That of Lake Van; 5. That of Lake Ourmia; 6. That of the 'volcanic valley' of Kapan. To the south of the flat valley of the Araxes, on the borders of Armenia, rise the almost insulated twin cones of the Great and Lesser Ararat. The Great Ararat, whose peak is 17,250 feet above the sea, and 14,320 above the plain of the Araxes, presents on this side, according to Abich, an enormous horse-shoe-shaped crater, called the Valley of St. James.

The Lesser Ararat is separated from the Greater only by a flat plain or Col, half a mile in width. It has the figure of a very regular pyramid or cone, truncated at the summit by a crater, which, however, appears not to have been eruptive in recent times. To the north-west of Ararat, towards Kars, Abich speaks of a vast volcanic system, called the Tantoureck, west of Bajazid; also of two great mountains (magnifiques cratères de soulèvement), called Sordagh and Aslanlydagh, and other 'volcanic ranges, Synak and Parlydagh, surrounding the high lake Balykgoell.' All of these are visible from the Little Ararat, as well as vast basaltic platforms beyond the Araxes and north of Erivan.

In A.D. 341, the mountains of Armenia are said to have split open and vomited clouds of flame and smoke. A tremendous earthquake in the year 1841 shook the two Ararats to their foundation, toppling down vast rocks from their heights, together with avalanches of ice and snow, into the valleys beneath. The shock was felt with great intensity through the neighbouring provinces as far as Shusa and Tabreez on one side, and Tiflis on the other.

Elburz, the loftiest peak of the Caucasus, believed to be upwards of 18,000 feet in height, has a crater on the summit; its lavas are chiefly trachytic.

Over the chain of the Caucasus, towards the Caspian on the east, and the Sea of Azof on the west, are scattered vast numbers of mud volcanoes, *i.e.* cones of a ductile, unctuous clay, formed by the continued evolution of a sulphureous and inflammable gas, spurting up waves and lumps of liquid mud. Some of them are 250 feet high.

The great east and west range of Tian Shan, connecting the Altai with the Kouen Lun, and through this with the elevated plateau of Persia, is said to be chiefly volcanic. Flames are also described as rising from Ho-te-keou mountain, near Turfan, 420 miles farther eastward. In the beginning of 1884, the Turkestan Gazette stated that as many as 90 distinct shocks of earthquake had been felt at Oosh since November 14, 1883. Other shocks had also recently occurred at Viernoe and Tashkend.

Syria.—The coast of Syria presents numerous indications of volcanic action. It is very subject to earthquakes, in one of which, in 1759, 20,000 persons are said to have been destroyed. The Lake of Tiberias is partly encased in basalt; and on one side a stream of recent-looking lava, a league in breadth, has run into it from the flank of a mountain at a height of nearly 1000 feet. Farther south, on the eastern border of the valley of Akaba, which continues the hollow of the Jordan to the Red Sea, are several volcanic cones.

Red Sea.—Ancient chronicles report eruptions near Medina in the years 1254 and 1276 (Humboldt, Kosmos, iv. 337). Von Hoff found porous lavas south of Mecca, in various places down to Damar, in lat. 15° N. Jabl Tier (Bird Island), in the Red Sea (lat. 16° N.), sends out vapour continually, and is composed of volcanic rock. In May 7th to 11th, 1861, volcanic eruptions occurred at Edd, on the African coast of the Red Sea, in lat. 13° 57′ N., and long. 41° 4′ E. Earthquake shocks on the 7th and 8th continued for an hour. At sunrise fine dust fell, at first white, afterwards red; the day was pitch dark, and the dust was knee-deep. On the 9th the fall of ashes abated, and fire was seen issuing from Jabl Dubbeh, a mountain about a day's journey inland.

Aden promontory, just outside the Straits of Bab-ul-Mandab, is entirely volcanic. The town of Aden occupies the bottom of a well-defined breached crater a mile and a half in diameter, encircled by precipitous walls from 1000 to 1800 feet high, and backed by still higher masses of volcanic rock. Pumice is regularly mined for export. There is, however, no record of this crater being active.

Socotra, opposite Cape Guardafui, has a volcanic peak, called Jabl Hajier, 5000 feet in height.

Makran and Cutch.—Proceeding eastwards, on the littoral of the Arabian Sea, in Hinglaj, or Makran, the ancient Gedrosia, are a series of mud volcanoes in continuous action. They are known to the Hindus as the Rama Chandra Kup, and are visited by pilgrims, who regard as miraculous the periodical elevation of the semi-liquid mass.

Cutch is farther eastwards. In June 1819 it had a severe shock of an earthquake, by which some hundreds of the inhabitants perished. At sunset, the shock was felt at Sindri; its little brick fort was overwhelmed by a great wave, which converted a hard and dry tract into an inland lake, extending for 16 miles on each side of Sindri, while 5 miles north of that place there arose a mound of earth, about 10 feet high, extending nearly east and west about 16 miles, and crossing the Pharran river, which was cut off from entering the sea. The natives called the mound Allah Band. A flood of the Narra of 1826 partially reopened it.

The Peninsula of India, in its central and western portion, between lat. 17° and 21° N., has been overflowed in prehistoric times by waves of basaltic lavas, which alternate with a fresh-water deposit, usually calcareous. The basalt forms elevated plateaux of many miles in extent, and seems to have flowed horizontally, in repeated sheets, over the bottoms of shallow tertiary lakes; but from what particular vents does not now appear, as only one crater at the Lunar Lake has been traced. The basalt is often amygdaloidal, contains much augite, and is occasionally nodular in structure rather than columnar. It has altered many of the sandy beds on which it reposes, or among which its dykes have penetrated, into jasper and other metamorphic substances (Hislop and Hunter, Journ. Geol. Soc. xi. p. 370). Farther south, on the eastern side of the Peninsula, in the Ongole, Guntur, and Nellore districts, and towards Madras, slight shocks of earthquakes repeatedly occur, and noises are heard there and in the Vinukonda taluk.

Coast of India.—Along the littoral of the Bay of Bengal, about 10 feet below the surface are beds of tenacious black clay, embedded in lacustrine remains. In the year 1757, a volcanic island arose off Pondicherry, south of Madras, and, after remaining for several days above the water, throwing out smoke and flame, it disappeared. About the same time, Cheduba (lat. 18° 40′ N.) and the islands along the shores of the Arakan coast were suddenly raised about 10 feet, having twice before, at intervals, as is supposed, of half a century, sustained similar upheavals. In 1762, during a violent earthquake, a mountain had sunk and disappeared near Chittagong; another had sunk down until the summit alone remained visible, and 60 square miles of sea-shore were permanently submerged (Dr. Buist, Bombay Geog. Soc. Journ. for 1856, p. 8). The island of Ramree (lat. 19° N.) is said to have been in violent eruption in March 1839; and, on the 10th January 1868, districts a little farther northwards suffered greatly from an earthquake, of which Asoloo was the centre. Sand and hot water came up, forming cones in several places. Silchar, Wongong, and places as far up into the Gangetic delta as Monghir, suffered a good deal.

Barren Island, in the Bay of Bengal, east of the Andaman Isles, is a permanently active volcano, with a cone about 4000 ft. high, rising in the centre

of a circular cliff-range which entirely surrounds it except at one point, where the sea has broken in. The explosions of this volcano recur regularly at intervals of about ten minutes. North of this (lat. 13° 24′ N.), the island of Narcondam has shown volcanic activity. It is a cone 700 feet high, with streams of lava visible on its flanks.

In *Eastern Asia* a great volcanic band stretches from near the arctic circle at Behring's Straits to the antarctic circle at Victoria, and its focus may be regarded as lying between Borneo and New Guinea. From this centre there radiate a number of great lines, along which the volcanic forces are exhibited in the most powerful manner.

The first of these extends northwards through the Philippines, Japan, the Kuriles, and Kamtschatka, giving off a branch to the east which passes through the Aleutian Islands and the Peninsula of Alaska. This band is continued towards the S.E. in the New Britain and the Solomon Islands, Santa Cruz, New Hebrides, New Zealand, and South Victoria.

Also, east and west from the great central focus there proceed two principal branches. One of these extends easterly through the Navigators' Islands and Friendly Islands as far as Elizabeth Islands. Another passes westerly through Java, and then turns north-westward through Sumatra, the Nicobars, the Andamans, and along the coast of Burma and Arakan.

In this great band, besides the 150 or more volcanoes which are known to have been in a state of activity during the historical period, there are several hundred very perfect volcanic cones, many of which appear to have recently become extinct, or are merely dormant.

For long distances, these chains of volcanic action are almost continuous, the only considerable breaks being between New Zealand and New Hebrides on the one hand, and between New Zealand and South Victoria on the other.

The chains on the east of Asia form the most remarkable train of volcanic vents visible upon the surface of the globe. It extends through 60 degrees of latitude,—from the north of the peninsula of Kamtschatka, beyond the point where it meets the transverse chain of the Aleutians, threading the Kurile, Japanese, and Loo-Choo insular ranges, almost touching the coast of China in Formosa, then stretching due south through the Philippines, whence several loop-lines appear to branch off, through Borneo, Celebes, the Moluccas, and New Guinea, in sweeping and almost concentric curves. These again unite on the south in the great east and west chain of almost continuous volcanic heights, from Timor Laut, through Flores and Java, bending once more northwards in Sumatra and the Andamans. The interior of this grand curvature is occupied by the great peninsula of Cochin-China and island of Borneo, whose rounded coasts repeat it with parallel concentric outlines.

Pou-fai-gnai and Pou-fai-noi, the Great and the Little Fire Mountain, are two active volcanoes near Muong-Luoc, in the kingdom of Luang Parbanin, Northern Laos.

In the peninsula of Kamtschatka there are 12 active volcanoes; in the Aleutian Islands, 31; and 3 in the peninsula of Alaska. The chain of the Kuriles has at least 10; the Japanese Islands and the islands lying to the south of Japan, 25; and at the present time there are 50 active volcanoes in the great group of islands lying to the S.E. of the Asiatic continent.

There are four active volcanoes in New Guinea, one or more marine volcanoes; several vents in New Britain, the Solomon Islands, and the New Hebrides; three active volcanoes in New Zealand. In the direction of Victoria Land, within the antarctic circle, Sir John Ross observed two lofty fire-emitting volcanic mountains, appropriately named by him (after his ships) Mounts Erebus and Terror.

New Zealand has a considerable area covered by the products of very recent eruptions. In the northern isle, Mount Egmont (8960 feet high), a truncated cone, with a smaller ash-cone on its summit, is occasionally active; its mass consists of clinkstone, lavas, and scoriæ. So likewise are Tongariro (6200 feet), in the centre of the widest part of the island, and Ruapahu (9000 feet), rather more to the south. The lake of Taipu, at the foot of Tongariro, is surrounded by hills of pumice and ash; and thence, in a N.E. direction, a line of solfataras and hot springs extends to the coast of the Bay of Plenty, in the centre of which, White Island, a volcano of considerable activity, rises from the sea.

Bourbon, in its western half, consists of the skeleton of a great early volcano, with crateral cavities, nearly encircled by precipitous rocks of trachyte, clinkstone, and basalt. The principal summit, Gros Morne, rises 10,000 feet above the sea. At the eastern end of the island is a volcano, 7000 feet high, still active, with small lava cones on its summit.

The following are the more important of the active volcanoes in the regions noticed in the above outline:—

Ararat, Great, 17,250 feet, borders of Armenia.
Ararat, Lesser.
Elburz, in the Caucasus, 18,000 feet.
Tian Shan range has Peschan, an active volcano, also Ho-te-keou, near Turfan, 420 miles east of Peschan. In the Komp district, province of Kham, in 1820, a village was destroyed by the earth opening. At Kham, N.E. of Lhassa, in 1845, a great earthquake; about 3000 people were killed and a goomba destroyed by the earth opening.
Ægean Archipelago.—Santorini crater, with the Great and Little Kaimeni Islands, formed 1573 and 1707.
Asia Minor.—Hassan Dagh, elevation 8000 feet.
Red Sea, Jabl Tier.—Edd Island, lat. 13° 57′ N., in eruption 7th and 8th May 1861; Medina, volcano in eruption 1254 and 1276; Zebayer Islands, 6th to 14th August 1846, a violent eruption.
Aden, crater extinct.
Bourbon.—Pitou volcano.
Comoro Islands have an active volcano.
Nerbadda.—Dumoh pahar, 27th May 1846, an earthquake.
Kattyawar, off Porbandar, October 1849, a submarine volcano poured forth poisonous gas, manifest for 30 or 40 miles out at sea; myriads of fish poisoned by it were floating on the surface of the ocean.
Cutch.—Bhooj earthquake, 16th to 20th June 1819, and on latter date the Denodour volcano burst out.
Hinglaj, along the seaboard of Lus, W. of Kurachee, several mud volcanoes, called Chandra Kup, constantly active.
Cochin, off the coast, the island of Vaypi rose from out of the sea A.D. 1341.
Pondicherry, off the coast, in lat. 11° 55′ N. In July 1757, fires were seen to break out on the surface of the sea, 3 or 4 leagues from the shore, throwing up stones and pumice.
Arakan.—Gheduba Island, lat. 18° 50′ N., and long. 90° 40′ E.; its volcanoes emit hot water, mud, and

stones, with flames. Regwan Island, raised about 1757? or 1760. On 29th July 1843, a small island appeared, and in a month again sank.

Khyouk Phyoo, a small volcano constantly active. On the 6th January 1845, volumes of flames burst from the sea.

Chittagong.—April 18, 1672, 60 square miles of lowland were permanently submerged; the mountain Ceslung-toom disappeared, and another sank so that only its summits were visible.

Bay of Bengal, east coast from Akyab to Cape Negrais is rising.

Burma.—At Memboo village, nearly opposite Magh-We, on the Irawadi, and at Grobagan, are mud volcanoes 15 feet high.

Barren Island, in lat. 12° 16′, long. 93° 54′, 1800? feet high, constantly active.

Narcondam Island, in lat. 13° 22′ N.; its cone is 800 feet high.

Sumatra has four active volcanoes.

Priamang is 20 miles inland from Bencoolen.

Gunong Dempo, 12,000 feet high, constantly emits vapour.

Simo, one of the Batu group, on the W. coast of Sumatra.

Java, according to Dr. Junghuhn, has 45 volcanic cones, of which 28 are in activity, in continual or occasional eruption. See Java.

Gunong Guntur, in eruption in 1800, poured out torrents of white acid and sulphurous mud.

Mount Slamak peak, 11,330 feet.

Ungarung peak, 5000 feet.

Telaga Bodas, old crater.

Tengger Mountains, old volcano, 8700 (7500?) feet above the sea. It has four cones of elevation, all of them in eruption; Bromo in 1866.

Papandayang, 7034 feet high, in S. of Java, lat. 8° N., in eruption in 1772.

Galung-gong, a few miles N.E. of Papandayang, in eruption 8th July 1822.

Gunong Raon, 10,180 feet high.

Merapi and Kloet, in eruption 1864, and Merapi 15th April 1872; many perished. Ashes fell at Solo for three days. The cone of 9000 feet was reduced to 5000 feet.

Lombok, volcano 7500 feet high.

Bali, volcano in eruption 1803.

Sumbawa.—Timboro, eruption 5th April 1815; 12,000 people destroyed; sounds heard 1000 miles off, and Java obscured.

Sarawak.—Gunong Api.

Gilolo.—Volcano in 1673 threw up much pumice.

Celebes.—Peninsula of Mucado has six volcanoes.

Amboyna, wholly volcanic; fearful eruption in 1694, another in 1820, and now emits sulphurous vapours and hot mud.

Moluccas.—Sorea Island, in 1693, entirely desolated by an eruption.

Ternate, wholly a volcano, 5755 feet high, in eruption in 1608, 1635, 1653, 1673, 26th February 1838, 25th March 1839, 2d February 1840. In 1673 ashes fell at Amboyna. In 1840 nearly every house was destroyed.

Banda.—Gunong Api, S. of Ceram, 1800 feet high, is seldom at rest, was burning from 1587 to 1824.

Matchian, N. of Batchian, and 50 miles from Ternate, in eruption 1646, and rent open 29th December 1862, when ashes fell at Ternate.

Timor, in violent eruption 1638, and a lake formed and peak disappeared.

Pulu Batu, N. of Flores, in 1850 in eruption.

Flores has three active volcanoes. In 1836 in eruption.

New Guinea.—Tanna volcano, in 1871 in eruption.

Sanguir Island has Abo volcano at its northern part, in eruption in 1711, also March 1856.

Alaska Island.—Ilaman peak, Behring Strait, 11,600 ft.

Unalaska or Matusch Kui Island, 5474 feet.

Unimak, 8076 feet.

Tanaga Island.

Kamtschatka has a group of volcanoes—

Krestowik, in lat. 56° 4′ N.

Klutchewsk, 16,500 feet high, in violent eruption from 1726 to 1731, and again in 1767, 1795, and 1825.

Uschinskaja Sopka, lat. 56° N., is nearly connected with Klutchewsk.

Tolbatschi, lat. 55° 51′ N., is 8313 feet high; discharges smoke and ashes from frequently shifting vents.

Schiwelatsh, on the north of the group, in lat. 56° 40′ N., and 10,544 feet high, has two summits; was in great eruption in 1739, and between 1790 and 1810 and 1854.

Japanowa, lat. 53° 32′ N., and 9055 feet high, sends forth continuous smoke.

Koriatskaja, in lat. 53° 19′ N., and 11,210 feet high, has much obsidian.

Awatska, in lat. 53° 17′ N., and 8910 feet high, in violent eruption in 1837.

Kurile Isles, chain is 720 miles long.

Paramouchir contains an active volcano.

Alaid, on its east, 12,000 feet high, in violent eruption in 1770 and 1793.

Formosa Island has four volcanoes.

Tachy-kang or Red Mountain, often in eruption.

Japan.—Yedo or Jeddo Island has Asama Yama volcano, in lat. 36° 22′ N.; in 1783, disastrous eruption, and still active.

Jesso Island has 17 conical mountains; the Usugatali or Mortar Mountain and Kajo Nore are burning.

Fusi Yama, in lat. 35° 18′ N., and 12,443 feet high, uprose B.C. 286. It has been in eruption A.D. 799, 863, 937, 1032, and 1707, and since has been quiescent. It is visited by pilgrims.

Mitake Island, in the Bay of Kagosima; Ounga on the W. coast.

I'wo-sima is S. of Kiou Siaou, lat. 30° 43′ N.

Oho-sima, lat. 34° 42′ N., was seen in eruption in 1797. From Oho-sima a line of volcanic islands runs south to Fatsi Sjo, in lat. 33° 6′ N., and thence to Bonin Islands, in lat. 26° 30′ N.

Asama Yama, near Wada Toge, has two active craters near the town of Oiwake.

Koosima and Oosima are two small volcanic islands between long. 139° and 140° E., near Cape Sangar.

In Kamakatka are seven volcanoes.

In Risiri Island is Langle volcanic peak, 5100 feet high.

In Niphon there are nine craters, one of them 12,000 feet high. Jake-yama, in lat. 41° 20′ N., at the N.E. extremity of Niphon, and another of same name, in lat. 36° 33′ N., are active.

In Kiou Siaou, five active volcanoes. The greatest is Wun-sen-ta-ki, on which is perpetual snow; it is worshipped. In 1793 an eruption occurred which destroyed Sima-Bara, with nearly 53,000 inhabitants. It is in lat. 32° 4′ N., E.S.E. of Nagasaki, and 4110 feet high.

Aso Yama, in lat. 32° 45′ N., is E.S.E. of Nagasaki, and Kirisima is in lat. 31° 45′ N.

Philippines.—Taal, in Luzon, in 1716 a terrific eruption, more violent in 1754, 7th August, 3d November to 12th December; detonations heard 300 leagues distant.

Mayon Island, 3200 feet high, is constantly ejecting smoke and scoriæ, and was in eruption in 1767, with a stream of lava.

Luzon has eleven volcanoes, one 3200 feet high, in eruption 1800 and 1814. Banajao is 7020 feet high.

Mindanao Island, in eruption 1640; ashes fell in Borneo and throughout the Moluccas.

Aringuay, in the province of Iloco, on 4th January 1641 broke out terribly at the same time with the volcano of Iolo and the Sanguie in the south of Magindanao, and the noise was heard at Cochin-China.

Manilla.—In 1645, for two months a succession of fearful earthquakes; in Cagayan a mountain overturned, 3000 lives lost; overthrown by an earthquake 3d June 1863.

Sandwich Islands.—Hualalei, on the W. coast of Hawaii, is active. Mauna Loa, 13,370 feet high, is in frequent eruption. The eruptions in 1843, 1852, August 1855, and 30th December 1865, were very severe.

Hawaii has Mauna Roa, 4300 metres high, is active; in eruption in 1833, and 1843, and 1855.

New Hebrides.—Tauna Island, lat. 19° 32' N., in eruption at 10 A.M. 10th January and 11th February 1878, accompanied with an earthquake and a tidal wave.

Ladrones have three or four active volcanoes.

Fiji Islands have several extinct craters.

Navigators' Islands are to the north of the Friendly group, and to the south of the Fiji. The peak of Tafua, 2138 feet high, is always burning. Two others, Assin, 2576 feet, and Upala, 3197 feet high, are surrounded by fields of lava.

Niua, or Good Hope Island, in lat. 16° 5' S., and long. 176° W., is one of the Friendly Islands; about every second year fire and lava burst from several parts of its surface.

Galapagos.—Chatham Island, 1200 metres high, has an extinct volcano.

New Zealand.—Tangariro, 2000 metres high.

Victoria Land, discovered by Sir James Ross.—Erebus and Terror volcanoes, active.

—*Moresby; Bennett; Logan; Bikmore; Wallace; Mrs. S. Elders; E. K. Kane; Lt. Burnes; Dr. Buist; Scrope*, p. 468; *J. W. Judd, Volcanoes; De Carne*, p. 189.

VOLOGESES, a Parthian king, successor to Gotarzes. Josephus tells us that Vologeses, on his accession, made over the province of Media to his younger brother Pakores, and Armenia to Tiridates, another younger brother. The Vologeses of the Greeks is, however, supposed by Lassen to be the Abagasus or Abalgasius, one of the Greek successors to Alexander in Arian Abakhafasa, A.D. 70 or 80.

VONONES, B.C. 100, called Balahara, supposed to have been a Parthian satrap who asserted independence, and created a kingdom for himself out of the dominions of Azilises.

VOOCH, or Korah, a pass on the border of the Ushterani Hills, nearly opposite Dehra Futteh Khan, constituting the boundary line between the Pathan and Baluch tribes. The Baluch tribes extend along the lower half of the Dehrajat frontier.

VOPA-DEVA, a Hindu grammarian who lived at Devagiri about the 13th century A.D., author of the Mugdha-bodha.

VORKAY, an island of the Eastern Archipelago, of great importance for the pearl fishery. Eight miles eastward lie several small islands, between which and Vorkay the trepang banks are situated. At low water, families wade from Vorkay towards these isles, carrying baskets at their backs, and having in their hands a stick provided with an iron point with which to take up the trepang. When the water is deeper than this, they make use of canoes. For pearl fishing on the banks situated at a greater distance, the Alfoer race use a prahu in which they embark their entire families. These vessels have a great beam, and the stern runs up into a high curve, while two planks project forward from the bows. The family reside in three or four huts composed of atap or Nipa fruticans leaves, erected within the vessel, and a railing runs entirely round it, apparently to prevent the children from falling overboard. The prahu is propelled by a large sail made of rushes, which folds up like a fan (in a manner similar to the sails of a Chinese junk), set upon a tripod mast of bamboos, while it is steered with two rudders. Two other masts are also erected, which answer no purpose but that of displaying several small flags. The pearl fishery is thus carried on. The trader makes an agreement for so much a hundred oysters, paying in advance a certain quantity of arrack, cloth, etc. The oysters are mostly small and black, in from 24 to 30 feet of water. The blood often bursts from the nose and mouth of the diver, and numerous sharks are there. In engaging these people, it is necessary to pay off their debts, and, free from this encumbrance, they will readily proceed to any part of the Archipelago.—*Earl, Ind. Arch. Papuans.*

VOWS. Luke v. 14, 'Offer for thy cleansing, according as Moses commanded.' A Hindu, after recovering from sickness, presents the offerings he had vowed when in distress, as a goat, or sweetmeats, milk, or anything directed by the Shastras. In Bengal, rarely is a child sick, or a cow in parturition, but milk is vowed to the lares or penates. In Mysore, when a Hindu woman fulfils a vow to the idol of the Annunomia temple, she covers herself with margosa leaves, formerly it is said over her naked person, but now outside her clothes. The Vrata of the Hindus are unconditional vows to perform certain religious ceremonies. Munnu is a conditional vow, promising to present offerings on condition that the god bestow such or such a benefit. The Vrata is a vow or an obligation superadded to a religious or moral one.—*Ward's Hindoos*, ii. p. 75.

VOYSEY, H. W., Assistant-Surgeon H.M. 67th regiment. He was attached to the Trigonometrical Survey under Colonel Lambton. He wrote several valuable reports on the Geology of the Peninsula of India; on the Diamond Mines of Southern India (As. Res. xv. p 120); on the Mosaic of Agra (ibid. p. 429); the Geology of Nagpur (ibid. xviii. p. 123), and on the Shells of the Gawilghar Range (ibid. p. 187).

VRIHASPATI, the planet Jupiter. Vrihaspati chacra, the cycle of 60 years, which gives a specific name to all the solar and luni-solar year. Vrihaspati mana, the year of Jupiter, during which he describes one sign of his orbit. The Telugu astronomers make no difference between this and the common solar year. Vrihaspativara, Thursday; Sukravara, Friday; and Sanivara, Saturday. In Hindu mythology, Vrihaspati is the guru or priest of the Devas, whom he once deprived of his blessing, in consequence of which they suffered greatly. The word is from Vrihat, great, and Pati, lord. See Graha.

VRIHAT-KATHA, the original Sanskrit book which is known to Europeans through the Arabic translation into the Alif Laila, or One Thousand and One Nights. The Sanskrit name means Great Story. It is a large collection of tales, from which also the Kathasarit-sagara was drawn.—*Dowson.*

VRIHAT SANHITA, an astronomical work by Varaha Mitra, who lived about the beginning of the 6th century of the Christian era.

VRIJ, the country of the Suraseni of the Greeks. In the tract of country lying between the Gandak and Mahanadi rivers, which is 300 miles in length by 100 miles in breadth, there are several ancient cities, some of which may possibly have been the capitals of the eight different clans of the Vriji, Vaisali, Kesariya, Janakpur, Navandgar, Simrun, Darbanga, Puraniya, and Motihari. In the time of Buddha, also, the Vriji were divided into eight clans, as the Lichhavi, the Vaidehi, the Tirabhukti, and others whose names are unknown.

Nothing presents so great a contrast, as the poor, slovenly appearance of the Vrij-bashi men, and the delicate features and the brilliantly fair complexion of the Vrij-bashini. The Vrij-bashi are a more pastoral people than their richer brotherhood of Muttra. There are about 5000 Vrij-bashi, out of which 200 families follow the profession of Panda. The Vrij-bashi are Dobay; their brethren of Muttra are Chowbay. The principal business of a Panda is to keep a look-out for pilgrims. In the midst of the town of Vrij is the handsome tomb of raja Ranjit Singh, who defended Bhurtpur so bravely against Lord Lake's army. Inside the dome of the tomb, the siege of Bhurtpur is represented. Lord Lake is dismounted, and standing before his white horse giving orders to his soldiers. On the opposite side of the dome, Ranjit Singh, in a plain white dress, is standing erect before his idol, at his devotions, with his ministers behind him. On the other two sides he is at his favourite field sports.—*Tr. Hind.* ii. p. 95; *Cunningham, India*, p. 448.

VRINDA-VANA, Sansk., from Vrinda, thick, and Vana, a forest, a village on the right bank of the Jumna, near Mathura, commonly called Bindraban. It is said to have been the site of a forest in which Krishna, as Gopala or the cowherd, passed his youth, associating with Gopin cowherds and shepherdesses grazing cattle. It is the original country of the Yadu. It is a holy Hindu town, and in a boat a most picturesque view may be obtained of it, presenting a panorama of great beauty. The circumstance which imparts most to the sacred character of Bindraban, is its having been the seat of the early revels of Krishna, the Apollo of the Hindus, Mathura or Muttra being his birthplace. Many a Hindu Anacreon courts the muses with lays dedicated to this youth, prominent in Hindu mythology, and minstrels and maids join in soft strains to his praise. Bindraban is noted for the manufacture of pretty toys made of a composition that may be mistaken for a mineral. Indeed, the vendors pass them off as such, and to enhance their value declare that they are brought from Jeypore, where articles of this description and marble toys especially receive a fine finish. The Vallabhacharya sect of the Vaishnava Hindus have many hundreds of their temples at Mathura and Bindraban. At Benares and Bindraban, the annual dances constituting the Ras Yatra, in commemoration of Krishna and the sixteen Gopi, are performed with much display.—*French, Tour of India*, p. 214.

VRISHA, Sansk., or Nandi, is the sacred bull of Mahadeva or Siva. It is his vahan, and by some described as the emblem of justice. In the Institutes of Menu, c. 8, v. 16, the divine form of justice is represented as Vrisha, or a bull; and the gods consider him who violates justice as a Vrishala, or one who slays a bull.

VRISHASPATI, son of Ungira, a Hindu philosopher who is said to have written several law books. The Skanda Purana describes him of a yellow complexion, and well dressed. His wife's name was Tara. This seems to have been the Vrishaspati who was the founder of a philosophical school of the Hindus. He asserted that the whole of the Hindu system was a contrivance of the priesthood to secure a means of livelihood for themselves. —*As. Res.* xvi. p. 5; *Ward*, iv. p. 24.

VRISHOTSARGA. Sansk. Letting a bull free at certain Hindu ceremonies, such as a marriage, a funeral, etc. The bull is considered sacred, and wanders about unmolested and unappropriated.

VRITRA, otherwise called Vritasura, also Ahi, in Hindu mythology, the personification of the rain-cloud, with whom Indra, the lord of thunder, battles. He is one of the deities of the Vedas. Vritra in the Rig Veda is described as a serpent-shaped demon, who stole the rain-producing clouds of heaven. It was destroyed by Indra. The Greek Apollo pierced with his lance the demon python; it is the sphinx of Œdipus, the dragon in the story of Perseus, the Zohak in the mythology of Persia, and the Ortheros of the Greeks, who guards the gates of Hades, attended by Cerberus, the Vedic Sarvara. He is the demon of drought and ungenial weather, with whom Indra, god of the firmament, is constantly at war, constantly overpowering, and compelling him to release the rain.—*Dowson; Garrett; Thomas' Prinsep's Antiquities.*

VUL or Iva, the Chaldee god of the atmosphere, the rain-giver.

VULPES, the fox.

Taaleb, ... Arab.	Nomri, ... Hind.
Shual, ... Heb.	Robur . . of Kandahar.
Lomri, ... Hind.	Kokri, ... Mahr.

Vulpes Bengalensis, *Jerdon, Shaw, Bly.*

Canis rufescens, *Gray.*	C. chrysurus, *Gray.*
C. kokri, *Sykes.*	C. xanthurus, *Gray.*
C. corsac, *Auct.*	

Konk, Kemp-nari, Can.	Khek-sial, . . . Hind.
Chandak-nari, . . ,,	Konka nakka, . . Tel.
Lumri, Lokri, . . Hind.	Gunta nakka, . . . ,,
Kokri, Khekar, . ,,	Poti-nara, ... ,,

This fox occurs throughout India and the adjacent countries, but varies both in size and colour in different localities, generally of a greyish-brown with a fulvous cast, passing in some cases to Isabella. It is always variegated above with the intermixture of whitish hairs. It is a very pretty animal, but much smaller than the European fox, with a short head, very sharp muzzle, oblique eyes, nut-brown irides, very slender legs, and very bushy tail trailing on the ground. Its principal food is rats, land crabs, grasshoppers, beetles, and fruit; the mango and custard apple are largely eaten. It always burrows in open plains, runs with great speed, doubling like a hare; but instead of stretching out at first like the hare, and trusting to its turns as a last resource, the fox turns more at first, and if it can fatigue the dogs it then goes straight away.

Vulpes ferrilatus, *Hodgs.* (Cynalopex ferrilatus, *Blyth*), a pretty, small fox of Tibet.

Vulpes flavescens, *Gray*, Silver fox.

Vulpes montanus, *Hodg.* | Bobur . of Kandahar.

This species is numerous in the valleys around Kandahar, hiding in burrows and holes in the rocks. It is about two feet long from the nose to the insertion of the tail, and the tail is about seventeen inches; height at shoulder about fifteen inches. Its tail is yellowish, back rather darker, inclining to brown, face and outer side of fore-legs and base of the tail pale-fulvous, spot on the side of the face just before the eyes, the chin (breast), the front of the fore-legs, a round spot on the upper part of the hind foot, and the tips of the hairs of the tail blackish, end of tail white, and ears externally bladic. The skins are soft, and are made into the neemchah and postin.

Vulpes fuliginosus, *Hodg.*, Thec-ke, Tib., is of Sikkim and Tibet.

Vulpes Griffithii, *Blyth* (V. flavescens, *Blyth*), is of Afghanistan.

Vulpes leucopus, *Blyth*, the desert fox of N.W. India, Cutch, Panjab.

Vulpes montanus, *Pearson*, Hill fox.

Canis vulpes montanus, *Pears.*	Vulpes montanus, *Gray.*
C. Himalaicus, *Ogilby.*	V. Nepalensis, *Gray.*

The hill fox of the Himalaya ranges up to the snow limit; and in winter, when the snow is on the ground, they are very numerous about Simla, coming close to the houses in search of offal. Its fur is exceedingly rich, dense, and fine, the longer sort measuring fully two inches upon the back, and the inner everywhere of considerable length and woolly character. General colour pale-fulvous, head mixed with white, tail bushy and white tipped. V. montanus was not seen by Dr. Adams beyond the wooded regions of Kashmir, and is evidently replaced by the silver fox, V. flavescens, which is not, however, partial to the barren regions of Ladakh, but is also to be met with on the tops of the Southern Panjab. V. montanus is generally distributed over the lower and middle regions of the Himalaya, up even to the limits of frost. Although often seen during the day, its depredations are chiefly at night, when it prowls about houses after poultry; and in the jungles, when it preys on kalij pheasants and other birds. This handsome species is readily recognised by the rufous on the back and pale-fulvous on the legs.—*Adams; Jerdon; Horsburgh.*

Vulpes pusillus, *Blyth* (V. flavescens, *Blyth*), Panjab fox, Salt Range.

VULTURE. Naturalists arrange the vultures variously. Jerdon classifies them as Vulturinæ or true vultures, Neophroninæ or scavenger vultures, Gypaetinæ or Lammergeyers, Sarcoramphinæ, American vultures, and the Gypohieracinæ or Angola vultures. The Indian birds are:—

Sub-Fam. Vulturinæ, True Vultures.
Vultur monachus, great brown vulture.
Otygyps calvus, black vulture.
Gyps Bengalensis, white-backed vulture.
G. fulvus, large tawny vulture.
G. Indicus, long-billed brown vulture.
Sub-Fam. Neophroninæ, Scavengers.
Neophron percnopterus, *Linn.*
Sub-Fam. Gypaetinæ, Bearded Vultures.
Gypaetus barbatus, bearded vulture.

The Egyptian vulture, Neophron percnopterus, also called Pharaoh's chicken, is a native of E. Europe, Asia, and Africa. In the temperate regions of the Himalaya it follows man wherever he congregates, and on the plains of India its gaunt, forbidding figure is seen stalking among all animal refuse. It is the smallest of the tribe found in the east, its total length seldom exceeding 26 inches. The vulture and crane, which soar high in the heavens, are sometimes called garuda and geed. Vultur monachus has been met with at Ambala. One shot there in 1866 weighed 17 lbs., and was 8 feet 2 inches in wing measurement.

VYAN MATA, the kula-devi or tutelary goddess of the house of Esupgol of Bunder-deva, whose daughter married Bappa.

VYASA in Sanskrit means distributor; in this Vyasa is kindred to the Greek Homeros, ἁρ and ἀρ. It is a literary title common to many old authors, but is especially applied to the Vyasa who arranged the Vedas, and who is also styled Saswatas, the immortal. His ordinary name is Krishna Dwaipayana. The name is also given to the compiler of the Mahabharata, to the founder of the Vedanta philosophy, and to the arranger of the Puranas; and the Puranas mention 28 Vyasas. The names given in the Kurma, Vayu, and Vishnu Puranas of the Vyasa are as under:—

Swayambhuva (Brahma).	Trivrishan.	Vena or Rajasravas.
Prajapati or Manu.	Bharadwaja.	Saumasushmyana or Trinabindu.
Usanas.	Antariksha.	Riksha or Valmiki.
Brihaspati.	Vaprivan.	Sakti.
Savitri.	Trayyaruna.	Jatukarna.
Marityu or Yama.	Dhananjaya.	Krishna Dwaipayana.
Indra.	Kritanjaya.	
Vashishta.	Rinajaya.	
Saraswata.	Bharadwaja.	
Tridhaman.	Gautama.	
	Uttama or Haryatman.	

the last of whom, Krishna Dwaipayana, was the most celebrated. He is said to have compiled the Vedas, written the Mahabharata, composed some of the Puranas and compiled the rest; but to have done all this was quite beyond any individual's power. Krishna Dwaipayana was the son of Parasara by Satyavati, a fisherman's daughter. Parasara met Satyavati when quite a girl, when crossing the river Yamuna (Jumna) in a boat. Their son Vyasa was called Krishna from his swarthy complexion, Dwaipayana because born on an island, and Kanina because of his illegitimacy. His mother afterwards married king Santanu, and had two sons; the elder was killed in battle, and Vichitra-Virya, the younger, died childless. Krishna Dwaipayana became the spiritual father or preceptor of his nieces, the daughters of Vichitra Virya, the son and successor of Santana. He preferred a life of religious retirement, but, in accordance with law, and at his mother's request, he took the two childless widows of her son Vichitra-Virya, and by them he had two sons, Dhritarashtra and Pandu, between whose descendants the great war of the Mahabharata was fought. Arrian gives the story thus: 'He (Hercules) had a daughter when he was advanced in years, and, being unable to find a husband worthy of her, he married her himself, that he might supply the throne of India with monarchs. Her name was Pandea, and he caused the whole province in which she was born to receive its name from her.'

One Vyasa was the propounder of the Vedanta philosophy or psychology. This Vedanta of Vyasa considered all existing beings and things to be an evolution of the deity in and throughout all beings and things. Sankaracharya went further, and declared that the soul of man is a part of the deity, not different, but confined in the body as a temporary prison, and on the death of the body flowing back to the deity.—*Rajasthan*, i. p. 30; *Rev. W. Taylor.*

VYAS RISHI, a sacred pool at the Rotang pass, the source of the Beas river, 13,000 feet above the sea. Endrasa is at the site of the confluence of the Beas and Sutlej rivers.

VYGAH, a river in Madura, lat. 10° 17′ N., long. 71° 37′ E., runs S.E. into the Bay of Bengal, after a length of 130 miles. The large anicuts upon it are Coonoor, diverting a stream of same name, Parea, Anai, and Chittanaik.

VYHRITIS. Sansk. These are the mysterious words Bhur, Bhuva, Swaha.

W

W, the twenty-third letter of the English alphabet, takes its shape from a repetition of the letters u or. v. Few of the modern languages of Europe have the letter w. In the English language it is a consonant when at the beginning of words and syllables, as wail, forward; but is a vowel when at the end of words, as in new, row. Many races have a difficulty in pronouncing the consonantal w, and others interchange it with the letter v. In all the dialects and tongues of the East Indies there is a perpetual tendency to interchange the sounds of v and w, or to substitute the latter entirely. The misuse of these two sounds is, in India, like that of London. In Tamil this often occurs, so that varam becomes waram; and in the Persian wao, used in Hindustani words derived from the Arabic, it has the sound of v and w, as vakil, wakil; vazir, wazir. In Mahrati, for the same letter, are the two sounds of wau and vau, the latter especially occurring when before i or e, or when combined with ri or r. In Malealam it has usually the sound of v, but in composition that of w, as in swarga. In Gujerati, the uneducated people pronounce the sound as w, the educated as v. The letter w is unknown to the Devanagari alphabet, though the educated youth of Bengal make strenuous efforts to introduce it in their present faulty system of alliteration in writing their own names.

WA. Burm.

Bariah, ... Hind. | Wass, ... Singh.
Varsh or Warsh, Sansk. |

The Burmese Buddhist Lent. It is from July full moon (Wa-tso) to October full moon (Thadwg-ynot). The strict people only eat once daily, at daylight. Feasts do occur, but are discountenanced, and dramatic performances are energetically denounced. During these three months, the wandering Buddhist mendicants were enjoined to remain in a fixed habitation. The monks are expected during this season to be doubly particular in abstraction from secular affairs, in abstinence and meditation. It is the great season for preaching to the laity.—*Yule*, p. 120.

WADA-GALLAI or Vada-Galli. Tam. A sect amongst the Tamil Sudra, commonly known as the right-hand caste, to distinguish them from the Ten-gallai, or the left-hand caste. The literal meaning of these words are northern sect and southern sect, but the points of difference are very obscure.

WADANG or Bayur, a light and tolerably durable wood of Java, employed for masts and spars of small vessels; but the surface must be covered with resinous substances to prevent it splitting.

WADARA, Waddar, or Waddiwar, the Wadara wanloo of the Teling people, are migratory, dwell in little huts of reed or fine grass, and move to any place where they can find employment. They are spread across the Peninsula of India from the valley of the Nerbadda to the south, all speaking Telugu. They are road-makers, tank-diggers, and labourers. The men and women vary greatly in size, though some of the men are stout and athletic. They all drink heavily. Wadara have two sections, one of them earth-diggers, who eat rats, the other quarriers and stone-cutters. The great increase in railroads and roads since 1860 ought to have made them wealthy, but they seem to live from hand to mouth.

WADE, JONATHAN, D.D., born in the State of New York, December 1798, died 1872, aged nearly 74. He laboured with Dr. Mason, Mr. Hough, and Dr. Adoniram Judson in teaching the Karen. He reduced the Karen language to writing, and was engaged with a Karen dictionary when he died.

WADHWAN, a Native State in Kattyawar, with an area of 238 square miles; population (1872), 45,431. The soil is black and light in about equal proportions. The ruler has power to try for capital offences, his own subjects only.—*Imp. Gaz.*

WADI. Arab. The Ouadi of the French, the channel of a stream or river, or any valley or ravine through which water flows, whether constantly or in the winter or cold seasons. Wadi-Araba, the valley connecting the Gulf of Akaba with Palestine, is in length 105 miles; its summit level is 495 feet, and Dead Sea extremity, 1146 feet below the Mediterranean. Wadi-al-Ghor, now called Wadi-Araba, is to the S. of the Dead Sea as far as Akaba. Wadi-al-Malh, Arab., the valley of salt, a salt lake about 18 miles S.E. of Aleppo, from which all North Syria is supplied with salt. The valley is 5 miles long, and 2 or 3 miles broad, and has a shallow lake of saline water. On this being evaporated by the sun's rays, the salt crystallizes on the exposed parts. Wadi Mojeb, the Arnon of Scripture, formerly dividing the Amorites from the Moabites. The ruins of Arayya, the ancient Arver, are on the edge of a precipice overlooking Wadi Mojeb. Wadi Musa is the site of Petra, the Edom of the prophecies, known to the Greeks as Αρκη while under the Nabatæi. The Nebatæi left Karak for this site, but when the line of commerce turned towards Egypt and towards Palmyra, Wadi Musa was deserted. It is now held by an Arab tribe of secluded habits. Wadi Tor is in the peninsula of Mount Sinai. During certain states of the wind, its sands, when put in motion, give out sounds like a bell. A similar mountain occurs near Kābul, described by Burnes in Bl. As. Trans., 1838, as Reg Rawan, or Moving Sand. Mounts Sinai, Horeb, Serbal, and Shomar have summits which rise to the height of about 8000 feet above the level of the neighbouring wadi or valleys. The view from the top of Sinai is that of a chaos of mountains.—*Newbold in As. Trans.* vii. p. 78; *Petterman in Geo. Trans.*, 1848, xviii. p. 89; *Wilson's Lands.* See Jabal-Nakoos.

WAG. Mahr. A tiger. Wag-Eswari, or tiger-goddess. Waghia, also Wagoba, is the tiger deity worshipped by the Bhil and Naikude Gond races, and, under the name of Bag Deo, by the Kurku. Waghia is worshipped by the Bhil in the form of a rude stone, at the edge of a forest or jungle, and sometimes in the form of a tiger. A recent writer says he overheard two village Bhil, Gopaji and Devaji by name, reviling their idol at the edge of the jungle in round terms. 'You fellow!' cried Gopaji, 'I gave you pulse and broth, and a chicken, yet you killed my buffalo!' 'Broth and a chicken!' screamed Devaji; 'I gave you three chickens and a goat, yet you carried off my child! What more do you want, you rascal?' The forest

races of the Sundur valley style the tiger their brother, and allege that their brother never hurts them. *See* Murli.

WAGHER, a race who occupy Dwarika. They and the Bhatail were long the terror of the neighbouring seas. They were in rebellion in Kattyawar, until, on the 8th May 1868, Mula Manik and four of his associates were killed.

WAGHORN, a lieutenant of the Royal Navy who advocated the Red Sea line for communication with India. Born 1801, died 8th January 1850. His widow was granted a small pension from the Royal funds. Count de Lesseps says that he owes to Waghorn the first conceptions of the Suez Canal, and has erected his bust on Waghorn quay at the south entrance. In 1845, Lieut. Johnson, R.N. steamed, via the Cape, in the *Enterprise* to Calcutta. Commander Wilson, of the Indian Navy, about 1850, steamed in the *Hugh Lindsay* in 21 days from Bombay to Suez.

WAGIRI a dark-coloured wandering race in the Southern Mahratta country about Dhulagaon. They are fowlers and hunters, snaring birds and animals. They speak Guj-rati amongst themselves. They worship Durga do not eat the cow or its kind, nor the village pig, which they call Hag-Dukar. Some of them bury some burn their dead. Hindus regard their flesh-devouring propensities with horror, and Muhammadans, however poor, loathe the men who track the wild boar to his reedy bed, and voraciously devour his carcase. The Wagiri has a bright, restless eye, and a wild and independent bearing; the expression of his features is strongly marked, evidencing the existence of more powerful passions in the individual than is common to the general character of the Hindu races. In character the Wagiri is daring and revengeful, ready to commit any act of violence for reward.—*Postans' Western India*, i. p. 203.

WAG-NAK. MALAY. The Bag-nak or tiger-claw weapon of the Mahrattas, worn on the fingers. It was with one of these that Raja Sivaji clutched Afzal Khan, the Moghul general, at a conference, and slew him.

WAGUR, the most eastern part of Cutch, inhabited by the Wagila Rajputs.

WAH! Amongst Muhammadans and Sikhs, an exclamation, used like the English Bravo! Well done! Hear, Hear! Hurrah! The usual war-cry of the Sikhs is 'Wah! wah! Guru ji ka fattah!' 'Hurrah for the victory of the guru!'—*History of the Sikhs*, p. 143.

WAHABEE. Muhammad ibn Abd-ul-Wahab, a native of the province of Nejd, belonged to the pastoral tribe of Temin. He was born at El-Ayneh in 1691, and from him sprang a sect which assumed the name of Wahabee. The doctrines which they adopted were severe and puritanical. They acknowledged one God, and believed that the Koran was an inspired writing. They also acknowledged Mahomed to be the prophet of God, but deprecated any peculiar homage being paid to him, as they considered him a mortal like themselves, though gifted with a divine mission. These doctrines spread with amazing rapidity through the various tribes of Nejd, and the reformers soon obtained a preponderating influence in the north-east part of Arabia; while by his powerful servant, Sheikh Mekrani of Nerjan, Abd-ul-Wahab carried his victorious arms into Yemen. On his death he was peaceably succeeded in his temporal and spiritual power by his son Abd-ul-Azeez, during whose reign the doctrines of the new sect were received through the greater part of the Peninsula. Mecca and Medina were added to their conquests in 1803 and 1804, the treasuries were plundered, and all the holy tombs, which were an abomination to these reformers, were destroyed. The power of the Wahabees continued to increase until 1813, when Muhammad Ali Pasha took up arms against them, and restored the holy cities of Medina and Mecca to the nominal protection of the Porte, but virtually made himself master of the Hejaz, and during the years 1814-15 conducted operations with varied success. On his return to Cairo, he sent his son Ibrahim Pasha, and the campaign which followed, characterized by a series of the most barbarous cruelties, resulted in the conquest of Deria, and the capture of Abdulla-ibn-Saood, the Wahabee chief. Ibrahim returned to Cairo, embarking from Jedda for Cosseir on the 16th November 1819; but under another leader progress was made in bringing the rulers in Yemen, and particularly the Imam of Senan, under the yoke of Muhammad Ali.

Muhammad ibn Abd-ul-Wahab was not an innovator but a reformer, whose aim was the restoration of Islam to its primitive purity and simplicity, by insisting that its fundamental dogma, 'There is no deity but God,' absolutely forbade all veneration to man, prophet, or apostle, living or dead, however highly distinguished by the divine favour. There can be no doubt that beyond this utter exclusion of human merit, the formula as originally proclaimed by Mahomed, implied the doctrine of the absolute sovereignty of God in a sense which reduced all created beings to a mass of unconditional passiveness. Palgrave gives a splendid dissertation on the full import of this symbol of Islam. The great Wahabee appears to have grasped this theory, but it is highly probable that his efforts to explain it only added to its abstruseness, thereby giving some colour to the charge brought against his writings by the orthodox, that they consisted chiefly of 'sophisms and speculations.' It is equally reasonable to suppose that a very limited number of his disciples were capable of appreciating the more recondite views which his power of abstraction enabled him individually to entertain of the nature and attributes of the Supreme Being. Less difficult of general comprehension, however, was that part of his system which denounced all honours paid to saints and tombs as heretical innovations, detracting from the worship due solely to the Creator, and therefore to be regarded and dealt with as idolatrous. To say nothing of pagans and Christians, whom all Muhammadans hold to be polytheists, the doctrine thus revived placed Sunni and Shiah, Ibadhiyah and Rafidhi, alike in the same category, and, moreover, sanctioned their being dealt with as such, despite their negation of any deity save one, by a strict adherence to the orthodox formula. Hence it was that 'they legalized the despoiling of the Muhammadans, taking their wives in marriage before they are legally divorced from their husbands, and without observing the Iddh, and also the enslavement of their children.' All these outrages, from the Wahabee standpoint, were solemn duties imposed upon them by their obligations to God and

Islam, which they could not forego without risking their own salvation. Wahabeeism, in fact, apart from certain speculative notions respecting the Supreme Being,—on the main perfectly in accordance with the theology of the Koran,—may be defined as a politico-religious confederacy, which legalizes the indiscriminate plunder and thraldom of all peoples beyond its own pale.

Towards the latter part of the 18th century the sect became very numerous, powerful and fanatical. In 1803 they laid siege to Mecca and Medina, and took them, slaughtering all who would not embrace their doctrines. They held these cities until the year 1809, when the legions of Egypt and Turkey were poured out against them. After many sanguinary engagements, the Wahabees were defeated, but not exterminated. It was against the collected power of this sect that the Indo-British army and navy fought the battles of Bar-ul-Khoar and Beni-bu Ali in 1819 and 1821. This creed has got adherents throughout all India, and some of its members seem early to have organized a conspiracy against the British Government.

In 1865 Faisal-ibn-Saood died, an old man and blind. He was a saintly personage, and had been a powerful ruler. During his long reign he had restored the Wahabee power, and had become master of nearly one-third of the Peninsula. Upon his death there occurred one of those wars of succession which have always been the misfortune of Arabia. These reforming views spread into British India in the early part of the 19th century, and agitated all the Muhammadans as well as the Government, and many Europeans have regarded the presence of the sect as a cause of danger. In this they have merely adopted the opinions of the non-reformers, and Wahabee has come to be applied to any devout Muhammadan, even good, devout men, leading pure and holy lives, earnestly seeking for the truth, cultivating literature assiduously; but they are compelled by the multitude of ordinary people to retire into the peaceful shade as the purity of their lives begets for them the objectionable name of Wahabee. The sect is simply an extreme form of Musalman puritanism. Its holy war is directed more against the supposed moral and ceremonial excrescences of modern Islam itself, than against the outside world of infidels. The supreme tribunals of Islam have unanimously and solemnly declared that India, under its present tolerant and equal government, is certainly not Dar-ul-harb ('the country of the enemy') upon whose rulers war should be waged by the faithful; and consequently no Indian Wahabee, who has not utterly broken with the orthodox portion of his church, can be disloyal on merely religious grounds. It is doubtless the case that the tendency of the Wahabee preaching is to encourage sedition, or at least a feeling of disloyalty; the history of the world teaches us that iconoclastic fanaticism is always apt to spread from religion into politics. But the Indian Wahabee who is disloyal to the British Indian Government would probably be equally disloyal if his sovereign were the Sultan of Turkey, the Khedive of Egypt, or the Grand Sheriff of Mecca. There are a good many Faraizi in Eastern Bengal, who are to all intents and purposes Wahabees, and their ignorance has on occasion been roused into sedition, and even into open disturbance, by the combined action of fanaticism and poverty. It is true, however, that there has existed an active propaganda of fanatic Wahabee Mullahs at great Musalman centres. Still, these fanatics are distinctly regarded as such by the vast bulk of the Musalman community throughout India, who are generally peaceable and industrious citizens, and look on the fanatics with dislike tempered only by indifference. The Musalman community themselves would be the last to say that it does not behove the Government carefully to look after this fanatic organization.

In India the sect are undoubtedly the most intelligent of the Muhammadan races and sects, but the Wahabee are still numerous in Northern and Eastern Arabia.

Mr William Taylor, in 1857, was the Commissioner of Patna at the very outset of the revolt, and he placed the leading mulvies (among whom was the notorious Ahmad-Allah) under precautionary surveillance, thereby paralyzing the entire body. Dewan Mowla Baksh, the deputy magistrate, devoted himself in loyal co-operation with him, and seven years afterwards received the Star of India. Wilayat Ali Khan, the most influential citizen of Patna, cast in his lot from the very first with the British authorities, and did inestimable service, for which he received neither commendation nor reward. Kazi Ramzan Ali and many others behaved well. In the middle of the century, acting from Patna as their headquarters, the Wahabees engaged for many years in treasonable practices, sending men and arms and treasure beyond the frontiers for the purpose of raising and waging a jahad or religious war against the British. Notwithstanding the events of the mutiny, the Wahabee mulvies or preachers in Patna redoubled their exertions to collect recruits and money for a jahad. Emissaries were sent to all parts of the country to preach and induce men to join in the undertaking. Thousands of quiet villagers from Lower and Eastern Bengal flocked to Patna, where they were entertained for a few days at Sadikpur, and thence sent forward in bands of eight or ten through Ambala to the Mulka Sittana Hills. Then followed the Frontier War in 1863, under Brigadier Chamberlain, which cost the British Indian Government much trouble, no small amount of treasure, and many valuable lives, there having fallen in that short campaign 847 European and native officers and men. Even whilst the war was being waged, the Wahabee mulvies at Patna were sending, in large quantities, gold mohurs and hoondies for the support of the rebels; and although the rebellion was crushed, temporary failure but stimulated them to renewed exertions, openly preaching sedition in every village of the most populous districts, unsettling the minds of the Muhammadan population, and obtaining an influence for evil as extraordinary as it was certain. Generally they repudiate the name of Wahabee. Most of the beef-butchers of Hyderabad, Madras, and Bangalore are of this sect. Contrasting the practice of Islam in these days with the pure deism inculcated by the Koran, Sir John Malcolm justly remarks:—'The followers of the prophet of Arabia have relaxed from the principles of their religion, and have granted a species of adoration not only to him and his immediate descendants, but to a number of learned or pious men who have been canonized as saints. The feelings of gratitude and

veneration which the conduct of individuals first created, have grown by excessive indulgence, and by the ardour of passions excited by contrary opinions, into sacred reverence and devotion. Their very garments have become relics of inestimable value; and in the course of time the same properties have been assigned to them as are supposed to have belonged to their possessors.' From this common progress of superstition hardly one of the numerous sects into which the Muhammadan religion is divided, can be deemed exempt. —*Hist. of Persia*, ii. 377; *Niebuhr's Tr.* ii. 131; *Jahan Numa*, p. 523; *Wellsted's Tr.* i. 5; *Burton's Mecca*, iii. 272; *Playfair's Aden; Badger, Imams of Oman*, p. 63; *Palgrave's Arabia*, i. 365.

WAHAB SHAHI, or Kirmani Wool, the wool of a sheep found in Kirman, a tract of country in the south of Persia by the Persian Gulf. It is used for the manufacture of a spurious kind of shawl cloth, and for adulterating the wool used for Kashmir shawls.

WAHI. ARAB. Inspiration given to the prophets. Ilham, ARAB., inspiration given to the Wali or saints.

WAIGIOU, written also Waigyu, an island between New Guinea and Gilolo, in the Eastern Archipelago, and not far from Gilolo. The island is occupied by a Papuan race, with nose flat, the lips thick and projecting, the complexion a dark olive, the eyes deep-seated, and on an average the facial angle 77°, but as high as 81°. In Gebbe and Waigyu, and in some parts of the coast of New Guinea, the complexion is lighter, and the peculiar texture of the Negro hair is absent. The inhabitants of Waigyu islands are described by M. Du Perry as having more regular features. The language spoken at Waigyu is entirely Papuan, being that which is used on all the coasts of Mysol, Salwatty, the N.W. of Guinea, and the islands in the Great Geelvink Bay, Waigyu, Gebbe, Poppa, Obi, Batchian, between New Guinea and the Moluccas, as well as the S. and E. peninsulas of Gilolo. The Waigyu islanders barter trepang for cotton and woollen stuffs brought in the Chinese junks.—*Wallace*, ii. p. 216.

WAINGANGA, a river which rises in the Seoni district, a few miles to the east of the Nagpur and Jubbulpur road, near the Kurai Ghat. For a short distance it flows in a north-westerly direction, then turning to the north, it skirts the west of the Seoni district, and not far to the west of Chhapara, where it is crossed by a fine bridge with twelve arches of 50 feet span, it turns again and flows towards the east down to its junction with the Thanwar. At this point it changes its course to the south, and, after passing through a mountain gorge, enters the open country known as the valley of the Wainganga. For about 60 miles it flows nearly due south, forming the boundary between the Seoni and Balaghat district; it is then joined by the Bagh, and flows in a south-westerly direction through the Bhandara district, in lat. 19° 36′ 10″ N., and long. 79° 50′ E. At the junction of the rivers Wainganga and Wardha to form the Pranhita, commences that mass of rocks which is known as the Third Barrier of the Godavery. The Wainganga is navigable during the rains for about 100 miles above the junction with the Kanhan. Its greatest breadth is about 300 yards.

WAIRAGARH, the eastern pargana of the Brahmapuri tahsil in the Chanda district. It is bounded on the north by the Bhandara and Raipur districts, on the east by the Raipur district and Bastar, on the south by the Ambgaon pargana and zamindari, and on the west by the Wainganga. Wairagarh is very unhealthy during the autumn and early winter months, and its trade has consequently been almost wholly diverted to the neighbouring town of Armori, but the zamindars of the north and north-east still look upon it as their capital, and many of the surrounding landholders have residences here. Good sandstone and granite are obtained near the town, and mines of diamonds and rubies were formerly worked in the vicinity.

WAISH or Wesh. PUKHTU. A voluntary redistribution of lands amongst the tribes of the N.W. frontier of British India.

WAIST-BELT, are often gold embroidered, with pearls, emeralds, rubies; usually they are of white cloth, or of shawls. The waistbelt is a part of the dress, alike of Muhammadans and Hindus, when on duty or appearing before a superior. It is the kamrbándhna or girding up of the loins of the Bible.

WAK, the supreme being of the Galla race of Shoa. Ateti, the female power of Wak. See Semitic Races.

WAKALU. KARN., TEL. A plural of Wakl or Waql, a farmer or agricultural race. The Wakaliga of Mysore have four sections,—Morasu, Hali Gangadikar or Gangahara, Nonabba, and Kongaru. Among the Canarese they are Hindu cultivators, whom the Abbe Dubois considered to be identical with the Tamil Vellalar. They are so merely as farmers. They eat flesh freely, and are not strict Hindus. They are indifferent soldiers, but serve locally. The women of several families of one of their clans or sects, that of the Morasu Wakaliga, follow the custom of having the fingers of the right hand amputated. There are about two thousand families in Mysore who believe in the duty of acting this practice of mutilation, which is forbidden by law; but so lately as the beginning of the year 1874, a woman had the operation performed secretly at Davanaholi, in the Bangalore district. Every woman of the sect, previous to piercing the ears of her eldest daughter, preparatory to her being betrothed in marriage, had to undergo the mutilation by the village blacksmith. The fingers being placed on a block, the blacksmith places a chisel over the joints, and chops them off at a single blow. The tradition connected with this rite is to the effect that Vrika, a rakshasha or demon, by a course of austere devotion, obtained from Mahadeva the power of consuming to ashes any person on whose head he might place his right hand. He then attempted to use this power to destroy Mahadeva, who fled and concealed himself in a grove, pursued by the demon. A farmer in a neighbouring field loudly denied having seen Mahadeva, but pointed with his finger to the grove. At this instant, to save Mahadeva, Vishnu appeared in the form of a beautiful Brahman girl, with whom Vrika became enamoured, but she withstood his advances until he should perform the Sandhya ceremony of applying the right hand to the breast, the crown of the head, and other parts of the body, and thus he reduced

himself to ashes. Mahadeva, issuing from the grove, resolved to deprive the farmer of the finger with which he had pointed to the grove, but the farmer's wife prevailed on Mahadeva to accept two of her fingers instead; and ever since then her female posterity, as a memorial of the transaction, sacrifice two fingers at Mahadeva's temple. The Wakalu cultivators in India number 665,215 souls.

WAKAMBA, a tribe about 70,000 in number on the Eastern Sohaili coast, formerly nomades, but now with some skill as farmers and traders, and have flocks, herds, and domestic ornaments. They wear a leather thong round their loins, and allow one end to fall behind like a tail. They have smooth, dark skins and slender forms. Their features are not those of the Negro, towards which race they feel a great contempt.

WAKHAN, a hill state north of Badakhshan; its chief lays claim to Grecian origin. Wood mentions a torrent in Wakhan, called Zar-zamin, gold ground. He says all the tributaries of the Oxus are fertile in gold.—*Wood's Oxus*, p. 382; *Yule's Cathay*, i. p. 236.

WALA. ARAB., HIND. In composition, a person who does any act, as Rakh-wala, Gao-wala, Ghora-wala, a guard, a cowkeeper, a horse-keeper. In the Firozpur district, the addition of Wala is a common term in naming villages, such as Sultan Khan Wala, Buta-wala, Akbar-wala; and probably the name of Ferozeshah may have been Ferozeshah-wala, and from the length of the word the latter part may have been dropped or shahar (a city) substituted.—*History of the Sikhs*, p. 54.

WALA-JAH. PERS. The title granted by the Mogul emperors of Dehli to Muhammad Ali, nawab of the Carnatic, and the family are styled Wala-jahi.

WALAJAHBAD, in lat. 12° 58′ N., and long. 79° 39′ E., 40 miles south of Madras, and 30 miles inland from the coast. The Palar river passes by to the south, about 500 yards distant. It was formerly a military cantonment.

WALAN, the name of a large but rare and much-valued tree in Amboyna, which was first described and figured by Rumphius in his Herbarium Amboinense, and called by him Ichthyoctonos montana. The inhabitants of Amboyna use the powdered bark of the roots for catching fish. Throwing the powder upon the water and mixing it till it foams, they cast a net, and in the course of an hour the net is generally found full of half-dead fish. The fish will recover from the effect of the poison if thrown into fresh water, and are quite wholesome as food.—*Eng. Cyc.*

WALAYAT. HIND., PERS. An inhabited country, a foreign country, as Europe, Persia, and Turkey. See Balayat; Valayat.

WAL'D. ARAB. He was born; son. Walid, father, therefore Maulud, born, birth, a mauludi. In the neighbourhood of Bombay, the Arab custom of adding the father's name is very generally followed, alike by Muhammadans and Hindus. An Arab, for instance, would be styled Ahmad bin Yakub, but in Bombay Ahmad wal'd Yakub. Ibn or bin and wal'd are both of them Arabic words, meaning Ahmad son of Yakub.

WALER, a term used by the British in India to designate N. S. Wales horses. The supplies from British India itself and the neighbouring inland countries have been insufficient to meet the demands and wants of India, and since A.D. 1840 small batches have been received from the Cape of Good Hope. These are horses of good figure and good temper, suitable for riding horses and for draught, but, like the Arab horse, high priced. Australia, however, has taken a hold on the Madras and Calcutta markets.

WALI. ARAB., PERS. A ruler, a prophet; the title of the Turkish Viceroy in Turkish Arabia. It was the title of the chiefs of the Hawiza tribe. There are six sorts of governors in Persia, viz. Wali, Beglar Beg, Kol Beg, Wazir, Sultan, Darogha. There were formerly four Wali or tributary princes in Persia, viz. the prince of Georgia, Sinna, Luristan, and Hawiza; but the Wali of Sinna is the only one remaining. The prince of Hawiza was called Moula or holy, and was a Syud or supposed descendant of Mahomed. Kalb Ali Khan, the murderer of Messrs. Grant and Fotheringham, was descended from the Wali of Luristan, who was of the Feili tribe.—*Rich's Kurdistan*, i. p. 211.

WALI, the literary name of a celebrated poet, who wrote in Urdu or Hindustani in the middle of the 17th century. He has been followed by many others down to the present time; their compositions are in general mere imitations of the Persians. The best author in this branch of poetry is Sauda, who lived late in the 18th century.—*Elph.* p. 432.

WALID, the 6th of the Ummiad khalifs of Baghdad, ascended the khalifat in A.D. 708. He conquered Sind, and carried his arms to the Ganges. Three years thereafter, in A.D. 718, his general, Muhammad bin Kassim, overran Gujerat, and spread devastation in his progress. He advanced on Chitore, but he was met and completely defeated by Bappa, a descendant of Goho, who had founded Edur.—*Elliot's Hist. of India.*

WALI KUKUN, a wood of Java, equal to the kusambi in weight, and exceeds it in hardness. It is employed for anchors, naves of wheels, machinery.

WALKER, LIEUT.-COLONEL ALEXANDER, Resident in Cutch, made great efforts to suppress infanticide amongst the Jhareja Rajputs.

WALKERA SERRATA. *Willd.* The Gomphia angustifolia of Vahl., a native of Malabar and Ceylon, has serrate, crenate leaves. The roots and leaves are very bitter, and are used in decoction by the inhabitants of Malabar as a tonic and anthelmintic.

WALKESHWAR, near Bombay, has a tank called Ban Ganga, fabled to have been produced by Krishna firing an arrow at the spot.

WALKING FISHES of India are species of Ophiocephalidæ. The hissar, or walking fish of S. America, is a species of Callichthys.

WALKING-STICK, a staff or cane carried in the hand for ornament or support. There are numerous kinds, as Malacca cane, Penang lawyers, Wanghee, supple-jacks, and other fancy varieties. The bamboo furnishes useful walking-sticks, as also the various palm trees, the Licuala, cocoanut tree, sago palm, betel palm, palmyra palm, also the kumbha wood of the Gmelina arborea, and the Chittunkoodoo wood of the N. Circars (perhaps Chitankaloo or Wrightia tinctoria). The Chinese greatly object to any one carrying a walking-stick, and their absence is supplied by lengthening the

stem of an umbrella. Cabbage walking-sticks are the stems of a variety of the garden cabbage (Brassica oleracea, *L.*), grown in the Channel Islands; the growth in height is promoted by constantly stripping off the leaves.

WALKING STICK INSECT, species of Phasma.

WALLA, the modern name of the ancient city of Vallabhi.

WALLABHIPUR. In A.D. 770, Wallabhipur, the present Walleh, which had the most brilliant court in India, fell before an irruption from the north, supposed by Mountstuart Elphinstone to be Persians under Nushirwan the Great, by Colonel Tod to be Scythians, and by another authority to be Indo-Bactrians. The name of Gurjjara in the time of Hiwen Thsang was confined to Western Rajputana, and it was still a distinct country from Saurashtra in A.D. 812, when Karka, raja of Lateswara, recorded a grant of land. Between this date and A.D. 1310, there is a gap of five centuries, during which period we have no mention of Gurjjara in any contemporary records. General Cunningham has a strong suspicion, however, that the movement of the Gujar race towards the Peninsula must have been connected with the permanent conquest of Dehli, Kanouj, and Ajmir by the Muhammadans, which ejected the Chauhan and Rahtor tribes from Northern Rajputana and the Upper Ganges, and thrust them towards the south. The Rahtor occupied Pali to the east of Balmer in the Samvat year 1283, or A.D. 1226. This settlement of the Rahtor must have driven the great body of the Gujar from their ancient seats, and forced them to the south towards Anhalwara Pattan and Eder. This was actually the case of the Gohil, who, being expelled from Marwar by the Rahtor, settled in the eastern side of the Peninsula, which was named after them Gohilwara. In the time of Akbar, the Gujar had certainly not penetrated into the Peninsula, as Abul Fazl does not name them in his notice of the different tribes which then occupied the Circar of Surat; and even at the present day there is no large community of the Gujar in the Peninsula.

WALLACE, ALFRED RUSSEL, born at Usk, Monmouthshire, 1822, an eminent naturalist, who devoted many years of his life exploring and describing the regions which he had visited. He travelled in South America from 1848 to 1852, and subsequently dwelt for eight years amongst the islands of the Eastern Archipelago. His researches were embodied in his valuable works, Travels on the Amazon and Rio Negro, Palm Trees of the Amazon, The Malay Archipelago, Tropical Nature, Contributions to the Theory of Natural Selection, 1871. He also contributed largely to the scientific journals, 1869 to 1872; on Australasia, with Ethnological Appendix by A. H. Keane, 1878; on Island Life, 1880; and on Islands, as illustrating Geographical Distribution, 1876. Mr. Wallace (ii. p. 250) believes that the numerous intermediate forms which occur among the countless islands of the Pacific are not merely the result of an intermixture of their races, but are to some extent truly intermediate or transitional, and that the brown and the black, the Papuan, the natives of Gilolo and Ceram, the Fijian, the native inhabitants of the Sandwich Islands, and those of New Zealand, are all varying forms of one great Oceanic or Polynesian race. Professor Huxley, however, is of opinion that the Papuans are more nearly allied to the Negroes of Africa than to any other race. Mr. Wallace has given to Europe a very full knowledge of the birds of that extensive region.

WALLAGO ATTU and Saccobranchus fossilis are mud frequenters; an esteemed edible fish of the Bay of Bengal.

WALLAMPOORY, a chank opening to the right, called in Calcutta the right-handed chank, is so highly prized as sometimes to sell for 400 or 500 or even 1000 rupees.

WALLANCHOON, a pass in Nepal, in lat. 27° 52′ N., and long. 87° 14′ E. The crest of the pass is 16,775 feet above the sea. The path leading up the pass for 8 miles is a narrow, stony, and steep gorge. The top is a low saddle, between two ridges of rock.

WALLEROO, a Dhangar tribe in the northern division of the Madras Presidency. They are also styled Yerra-walleroo.

WALLICH, NATHANIEL, a medical officer of the Bengal army, an eminent botanist. He collected plants in the Calcutta Garden, in Nepal, Singapore, Penang, Oudh, Rohilkhand, the valley of Deyra, Martaban, Ava, etc., and had collections made in Sylhet by Francis de Silva, in Kamaon by Robert Blinkworth, in Srinaghur by Kamroop, in Tavoy and the Tenasserim coast by William Gomez. He had in addition specimens collected by Heyne in the Peninsula generally, by Noton in the Neilgherries, also by Moorcroft in the more elevated mountains bounding India on the north, in the Himalayan range by Dr. Royle, in Sirmur by Mr. S. Webb and Dr. Govan, in Sylhet and Chittagong by Bruce, in Pundua by Smith, and in Penang by Porter. His Plantæ Asiaticæ Rariores, 3 volumes folio, contains 295 coloured lithographic plates, with monographs by Professor Nees Von Esenbeck on Indian Laurineæ and Acanthaceæ, by Mr. Bentham on the Labiatæ, Professor Meisner on the genus Polygonum, and Von Martius on Restiaceæ. He was long in charge of the Government Gardens at Calcutta, having succeeded Dr. Roxburgh. He wrote on Indian Woods, in Bl. As. Trans., 1833, ii. 77; and besides editing a portion of the Flora Indica of Dr. Roxburgh, he commenced, in India, an illustrated work on Nepal Plants, Tentamen Floræ Nepalensis, which was the first specimen of lithography ever produced in India. Drs. Hooker and Thomson estimated his great collection at between 6500 and 7000 species.—*Wight's Prod.* i. p. 18.

WALLICHIA OBLONGIFOLIA, the Ooh of the Lepcha, a palm which grows in Sikkim. It affords an admirable fodder for horses, who prefer it to any other green food to be had in those mountains.—*Hooker*, i. p. 143.

WALL OF CHINA was built to check the inroads of the warlike pastoral tribes. The generals of the emperor Che-hwang-te having subdued the people in the south, nothing more remained to be done than to subdue these Tartars, or at least to put a stop to their inroads. Some of the northern states had eventually built a wall, to keep these unbidden guests out of their territories. Che-hwang-te therefore resolved to erect the Great Wall, which commences at Lin-teeaou, in the western part of Shen-si, in the mountains of Leaou-tung, and

terminates in the sea, a distance of more than 1500 miles. It runs over hills and rivers, through valleys and plains, and is perhaps the most stupendous work ever produced by human labour. He lined it with fortresses, erected towers and battlements, and built it so broad that six horsemen might ride abreast upon it. To lay the foundation in the sea, several vessels, loaded with ballast, were sunk, and upon this the wall was erected. Every third man in the empire was required to work on it, under the direction of Mung-teen, B.C. 240.

WALNUT.

Akrot, Jowz, Khusif, Ar.	Starga, . . . Ladakh.
Than-than, . . Chenab.	Okher, ... Nepal.
Khor, Ka, Darga, ,,	Char-mughz, . . Pers.
Hu-t'au, Kiang-t'au, Chin.	Girdighan, . . . ,,
Noix, ... Fr.	Jouz-i-rumi, . . . ,,
Dun, ... Kangra.	Ughz, Waghz, . Tr.-Ind.

The walnut tree, Juglans regia, grows wild in the N.W. Himalaya at heights from 8000 to 10,000 and 11,000 feet; but it does not ripen its fruit above 9000. It has long been cultivated in Persia and Turkestan, and has been taken westward to England and eastward to China. Honigberger states that a twig of the walnut tree, Juglans regia, is kept in a room as a means of dispelling flies. The Persian walnut kernels are eaten, or are made into pickles or ketchup. The Kashmirians use the walnut as a dye for black and green colours; the former, from the ripe fruit, is a 'fast' or permanent dye, and the latter is furnished from the walnuts which fall into the ground while they are still green. The latter colour is not permanent. From the kernel an oil is extracted, which is used not only for burning in lamps, but also for culinary purposes. It is said also to be made the medium for extracting the perfume of the jasmine, the yellow rose, and the narcissus. One-fourth of flower is added to three-fourths of oil, and the whole is well corked up in a jar or bottle. It is then exposed to the sun for five or six weeks, by which time the oil is found to be sufficiently impregnated. Walnut oil forms an extensive and profitable article of export into Tibet and Yarkand. Walnut wood was the chief cabinet-wood of Europe before the introduction of mahogany. Black walnut wood (Juglans nigra, *L.*) is much used in the United States for cabinet-work; also butternut wood (Juglans cinerea, *L.*) of the United States. —*Stewart.*

WALSURA GARDNERI. *Thw.* A small tree growing in the central provinces of Ceylon, at an elevation of 2000 to 4000 feet.—*Thw.*

WALSURA PISCIDIA. *Roxb.*

Joe-boe, ... Burm.	Wallurasi, ... Tel.
Walsura, . . . Tam.	

This tree grows in the Circars, is very plentiful in the Pegu, Tounghoo, and Tharawaddy forests. Its timber is large, heavy, and strong, white-coloured, and adapted for every purpose of house-building. In India the bark is thrown into ponds to stupefy fish, which, coming to the surface, are easily taken, and are not considered injurious to be eaten.—*Roxb.; Royle, Ill.; Voigt; M'Cl.*

WALSURA ROBUSTA, a tree of Sylhet; the bark is not employed as a fish poison.—*O'Sh.; Roxb.* ii. p. 386.

WALSURA TERNATA. *Roxb.*

Kaka walsura, . . Tam.	Chinna valasa, . . Tel.
Chinna wallurasi, . Tel.	Vada valasa, . . . ,,

A small tree growing on the sides of hills. It flowers during the hot season. Walsura villosa, *W. and A.*, is a tree of Moulmein.—*Roxb.*

WALUR LAKE, in Kashmir, is the largest sheet of water in the valley, formed by an expansion of the river Jhelum (Jhilam). The centre lies in lat. 34° 20′ N., and long. 74° 37′ E. Length from east to west, 21 miles; breadth from north to south, 9 miles. Celebrated for its picturesque beauty. Contains a small island, with extensive ruins of an ancient Buddhist temple. Subject to violent squalls.—*Imp. Gaz.*

WAMAN-DUADASI, from Waman, a dwarf, and Duadasi, the 12th day of the month Paksh, about the 10th September. It is a Hindu ceremonial in commemoration of the fifth incarnation of Vishnu, who assumed the form of a dwarf to prevent Bali by his austerities acquiring dominion over three worlds. The dwarf put his foot on Bali's head and crushed him to Patali.

WA-MEE, a Chinese bird kept for fighting. They are good songsters.

WA-MO. Burm. Bamboo fungus, an anthelmintic.

WANA. Hind. Divinities of the air, in opposition to Asa, pl. Asen, which, according to Bunsen, means existent, living ones.

WANA-GANA-KALOO, Curraganica, and Punchunganigaloo are dealers or shopkeepers of Telingana, and called in common parlance by the Hindi word Teli or oilman. They are petty traders and shopmen in the Ceded Districts.

WANDEROO., Singh., is the name in Ceylon for the Presbytis ursinus, the P. thersites, P. cephalopterus, and other species, and it has also been applied, though erroneously, to the Silenus veter, *Linn.*, of the Malabar coast. The low country Wanderoo, P. cephalopterus, is replaced in the hills by the larger species, P. ursinus, which inhabits the mountain zone of Kandy. P. thersites is chiefly distinguished from the others by wanting the head tuft. Some are as large as an English spaniel dog, are of a darkish-grey colour, and black faces with great white beards round from ear to ear, which make them show just like old men. This sort does but little mischief, keeping in the woods, eating only leaves and buds of trees, but when they are caught they will eat anything. They are called Langoor on the continent of India and in Further India, where the species of Presbytis are P. albocinereus, entellus, Johnii, jubatus, obscurus, Phayrei, pileatus, priamus, and schistaceus. In Ceylon there are five monkeys, four of which belong to one group, the Wanderoo, and the other is the little graceful grimacing Rilawa, which is the universal pet and favourite of both natives and Europeans. The Tamil conjurors teach it to dance, and in their wanderings carry it from village to village, clad in a grotesque dress, to exhibit its lively performances. It does not object to smoke tobacco. The Wanderoo is too grave and melancholy to be trained to these drolleries.—*Tennent, Ceylon*, p 10.

WANDIWASH or Vandivasu, the chief town of a taluk of the same name in North Arcot district, Madras, lat. 12° 30′ 20″ N., long. 79° 38′ 40″ E., 20 miles north of Gingi. It was stormed in October 1752, by the sepoy soldiers under Major Lawrence. In 1757 the French garrison twice repulsed the British. A more energetic attack, under Monson, in 1759, was also unsuccessful.

Immediately after this, the French soldiers mutinied, and although they were speedily pacified, before the end of the year the fort surrendered to Coote. In 1760, Lally appeared before the fort; in a day or two he was joined by Bussy and 300 Mahratta auxiliaries. Before the siege had far progressed, Coote came up, and in the pitched battle which ensued the French were utterly routed, and Bussy was taken prisoner. This victory was in itself and in its consequence the most important won over the French in India. In 1780, Lieutenant Flint by a bold stratagem saved the fort from falling into the hands of Hyder Ali, and with very inadequate means held it for nearly three years against every device of the enemy. Twice he was relieved by Sir Eyre Coote, and twice at least he repelled most vigorous assaults.—*Imp. Gaz.*

WANI, a Lingaet or Jangam sect, numerous in the Canarese-speaking country, and extending in the direction of Poona and Bombay. They arrange themselves into the four sections, Rasot, Diksot, Melwant, and Tailwant, who eat together but do not intermarry. The Tailwant drink only tank water, which is first strained and carefully covered with a cloth to prevent injury to animal life. The Rasot have no guru, which the other three have. The Wani are shopkeepers and agriculturists. They marry girls when five to eight years old. The couple are placed sitting on a mat or bullock saddle, to which they are lifted on the crossed hands of four men, who put betel leaf in their mouths and complete the ceremony. Widows are remarried. They inter their dead in a sitting posture, and on the third day sprinkle rice and milk on the grave. Wania, also Vania, are pronunciations of the Banya name; the Banya of Bengal.

WANIKA, the general name given to the African tribes near the Suhaili coast. They fear an imaginary being called Muansa, which they suppose to be a wild beast in the woods, and an imaginary spiritual shade called Koma.

WANJARA or Banjara, a race of grain and cotton carriers, spread thoughout India. The name is supposed to be Vanachara, that is, wanderers in the forests.

WANKANER, a Native State in Kattyawar. Area, 376 square miles; population (1872), 28,750. A black marble is found within its limits. The nearest port is Joria.—*Imp. Gaz.* ix.

WANNIAH, a race in the Batticalao district of Ceylon, who have traditions about their queens, and show the remains of a bridge built for their use.—*Lee's Rebeyro*, p. 80.

WAQAF. Arab. Land or other property appropriated for religious or charitable purposes.

WAQIDI, a biographer of Mahomed, born at Medina, A.D. 747, A.H. 130, and died in Baghdad, A.D. 822, A.H. 207. He expended 2000 dinar in buying books, and left behind him 600 chests full. His secretary was Ibn Sa'd, and he had two slaves as amanuenses.

WAR in the Dravidian tongues is the dialectal variation of Varu, Sansk., an individual.

WAR. Mahr. Also written Wari, Bari, Badi, Bati, Vati, derived through the Hindi from the Sanskrit, means an enclosure, a garden, a house or dwelling, takes in the Mahrati the form of Warkuree, signifying a parterre, a yard around a house.

WAR. Syriac. The general term for a stony district. War-ed-djamous, the war or district of the buffaloes.—*Robinson's Tr.* ii. p. 127.

WARA, Wada, Vada, Vado, Varo of the Mahrati and Gujerati, meaning a ward or quarter of a town, occupied by people of the same avocation, is also from the Sanskrit. It is met with in everyday conversation, as Bahmanwara, the Dherwara, the Brahman and Pariah quarter; a common termination to towns and portions of towns, as Anhilwara, Dherwara, Bahmanwara.

WARA, a town in the Konkan near Bombay, from which was obtained a sculptured slab. The character used in its inscription is that of the Saurashtra coins and long-tailed Deva-Nagari. No gods are mentioned, but there is a trisula on the slab. The inscription is a fragment, and cannot be fully translated; but Mr. Prinsep says it may be as old as the Gujerat coins with Greek heads upon them. The trisula, without the mention of Hindu gods, would seem to indicate that it is not necessarily an exclusive emblem of Siva. —*Prinsep's Antiq.* v. p. 340.

WARANGAL, ancient town, 86 miles N.E. of Hyderabad city, lat. 17° 58′ N., long. 79° 40′ E. Warangal was the ancient capital of the Hindu kingdom of Telingana, founded by the Narapati Andhras. The kings of Andra, whose capital was Warangal, are said to have been connected with the Andra race of Magadha, but it must have been by country only, for Andra is not the name of a family, but of all the inland part of Telingana. The records of the inhabitants mention Vikrama and Salivahana among the earliest monarchs; after these they place the Chola rajas, who were succeeded, they think, about A.D. 515, by a race called Yavana, who were nine in number, and reigned as they say for 458 years, till A.D. 953. About this time the Ganapati rajas began, but the first authentic mention of them was in the end of the 11th century, under Kakati, from whom the whole dynasty is sometimes named. He was an officer or feudatory of the Chalukya kings of Kalyan, and gained victories over the Chola kings. The Ganapati rajas attained to greatest power about the end of the 13th century, when local traditions represent them as possessed of the whole of the Peninsula south of the Godavery; but Professor Wilson limits their rule to between lat. 15° and 18° N. In 1332, their capital was taken by Kafur, the general of Ala-ud-Din, and their importance, if not their independence, destroyed by a Muhammadan army from Dehli, and two of its officers settled at Vijayanagar. At one time subsequent to this they seem to have been tributary to Orissa. They merged at last in the Muhammadan kingdom of Golconda.

Warangal is said also to have borne the name of Arnabunda. A sculptured slab obtained there had an inscription in Telugu and Uriya, with Sanskrit slokas. Its date was Saka 1054, or A.D. 1132, being the year Chetrabhanu of the Vrihaspati Chakra, or sixty years' cycle of Jupiter. The inscription contains a long account of Rudra Deva's genealogy and of his battles. There are not any praises of Brahmans, or even mention of them. It is now famed for its manufacture of carpets. In the town of Hunnumconda are the ruins of a famous temple. The structure is composed of a hard black rock, elaborately sculptured. Four large columns, highly carved, support a roof of

solid slabs; although the legend runs that a thousand pillars once supported the fabric, but a few now remain standing. Inside the pavilion is a gigantic bull (couchant), sculptured out of black trap, highly polished, which is an admirable specimen of workmanship of its kind. The temple is entered upon wide steps of solid black trap-rock. The landing is in a porch supported by two advance columns, with elegantly-sculptured bases, having massive parapets between them. The capitals and entablatures are likewise exquisitely carved, with eaves hanging over them about five feet over their bearings. The building claims attention for its great antiquity, built, it is said, a thousand years ago by Raja Burthop Roothroo, to whom also is attributed the gigantic works scattered over the Warangal district, such as the great wall and fort of Warangal, and the embankment and masonry adjuncts of the Pakhall lake, etc. In the road from Hyderabad to within forty miles of Warangal, barren rocks, which intensify the heat of the sun, and arid plains, are the prevailing features, and water is both scarce and bad. At Bonagherry, 26 miles from Hyderabad, is a hill fortress or drug, planted on the summit of a precipitous rock, rising abruptly from the plain to a very great height; the road extends only to Hunnumconda, a distance of 90 miles from Hyderabad.—*Elphin.* p. 221; *Cunningham, An. Geog. of India*, p. 527; *Fergusson.*

WARBLER, a name applied to several genera and species of birds. The pretty blue-throated warbler Cyanecula succica, of the N.W. Himalaya, frequents the mustard fields and low scrub, frisking about like the robin redbreast. On bleak situations in the Himalaya, Mr. Adams met with the black-breasted warbler Calliope pectoralis. It is a solitary bird, and affects the stunted juniper bushes at high altitudes; it is about the size of the redstart, which in habits it much resembles. —*Adams, Naturalist.*

WARD. Sir Henry Ward, a civil servant, Governor of Ceylon, and who died of cholera while Governor of Madras in 1860. In Ceylon he gave encouragement to settlers, removed the many difficulties which beset them; he constructed great trunk roads throughout the length and breadth of the island, and opened up the districts by admirable branch communications. Rivers and streams were provided with temporary bridges until the finances increased, when they were replaced with permanent structures; and ere he left the colony he had the satisfaction of opening the suspension bridge at Gampola and the new bridges at Katugastututy, magnificent structures, which will remain lasting monuments of his rule, and will bear his name to posterity. Sir Edward Barnes may be said to have founded the colony, and Sir Henry Ward to have formed it.

William Ward, the missionary colleague of Carey in the Serampur Mission. He was born at Derby in 1769, and learned the trade of a carpenter. He arrived at Serampur on the 13th October 1799. He was fearless, fond of work, somewhat democratic, slightly opinionated, with a capacity for organization, and with that marvellous control over Asiatics which belongs to that temperament. The book he wrote, a View of the History, Literature, and Religion of the Hindus, with all its exaggerations and affected prudery, is still valuable as illustrating the popular habits, manners, and religious belief of the masses, and as giving the manners and customs of the E. I. Company's servants at the beginning of the 19th century. It went through three editions.

WARDHA, a river which rises in the Satpura Hills between Nagpur and Betul. It is a river of importance in the Central Dekhan. It flows south-east, separating the Nagpur, Wardha, and Chanda districts of the Central Provinces from the Berars and the Nizam's dominions. Its first great affluent is the Pain Ganga, which it receives on the Nizam's or right bank, about 190 miles from its source; 64 miles lower down (a little above Chanda) it joins the Wainganga, and the united stream, thenceforward known as the Pranhita, flows on in the same direction to join the Godavery at Seroncha. It is at the junction of the Wardha with the Wainganga that the great obstacle to the Godavery navigation scheme, known as the 'Third Barrier,' occurs. The bed of the Wardha is throughout rocky and deep; in the monsoon it becomes a furious torrent, and carries a considerable body of water. The railway bridge which crosses it at Pulgaon is of iron, and consists of fourteen sixty-foot girders, resting on masonry piers. In the hot months, however, the stream is everywhere fordable. Timber rafts can be floated down this river. The valley of the Wardha is a rich tract of country lying between the river and a range of hills which, receding as the Wardha district is entered, leave a considerable open space, which widens gradually to the south. In general the country is well wooded, and in the eastern portion of the Hinganghat subdivision the jungle predominates over the cleared and cultivated tracts. The plain of Hinganghat and the plain and hill of Girar are spots of great geological interest. At the former place a fresh-water stratum may be traced, and silicified wood picked up in abundance at the latter; the hillside exposes the fresh-water stratum in all its varieties, while the plain is strewn with curious zeolitic concretions resembling betel-nuts or nutmegs, which have issued from the soft subjacent rock. The geologic formation is interesting. The trotting bullock of this part of the Central Provinces is famous. The breeding of horned cattle generally is carried on on a large scale in the northern and hilly part of the district, which affords excellent pasture in the cold season, but in summer most of the herds are taken to the jungles of Mandla and Chanda. The breed of buffaloes, too, is very fine.—*Madras Conservator's Reports*, p. 4; *Central Provinces Gazetteer.*

WARDHA, chief town of Wardha district, Central Provinces, lat. 20° 45′ N., long. 78° 40′ E. The district is in the Central Provinces, lying between lat. 20° 18′ and 21° 21′ N., and between long. 78° 4′ 30″ and 79° 15′ E. It forms a triangle with its apex towards the north-west. The base rests on Chanda district, while on the western side the river Wardha separates it from Berar. Population (1872), 354,720 souls. The great sheet of trap which covers the Berars, and spreads as far as the coast of the Arabian Sea, has flowed over the whole of the district. The black soil varies in depth from 10 feet to a few inches, the average thickness being about 2 feet.

WARING. Edward John Waring, M.D., F.R.C.P. Lond., F.L.S., Commander of the Indian Empire (1881), a medical officer of the

Madras army, 1849-59, author of two editions of a Manual of Practical Therapeutics (1854), also Bazar Medicines, three editions; editor of the Pharmacopœia of India (1868); author of the Bibliotheca Therapeutica, 2 vols. (1878-89), The Tropical Resident at Home (1866), Cottage Hospitals (1867), The Hospital Prayer Book (1872), and Statistics of an Enquiry into the Pathology and Statistics of Abscess in the Liver; Medical Notes on the Burmese, The Vital Statistics of the Madras Army, Statistical Notes on Tropical Diseases.

E. Scott Waring, author of Tour to Shiraz by the Route of Kazroon and Firozabad, with Remarks on their Manners, Customs, etc.; also History of the Mahrattas, 1810.

WARINGIN TREE, ANGLO-MALAY, is the Ficus Benjamina, very closely resembling the banyan tree of the continent of India, spreading in like manner over a large space of ground, the lateral branches sending down shoots, which take root, and become a supplementary trunk. The wilder Papuans delight in residing among the branches of the waringin trees, whose dense foliage and horizontally-spreading branches render them well adapted for the purpose. This tree is of peculiar interest in connection with the earlier history of the native races of the Far East, as it is regarded with a superstitious veneration by all the aboriginal tribes of the Archipelago, as well as by those of the northern coasts of Australia, and by the lower classes, at least, of the Chinese.—*Mr. Earl*, p. 116.

WARK. HIND. A leaf of a book, a leaf of a tree. Wark-i-nukra, silver leaf. Wark-i-tila, gold leaf, etc.

WARKA-bin-NAUFEL, cousin of Mahomed's wife Ayesha. He was skilled in Jewish learning, and is said to have translated the Scriptures from Hebrew into Arabic.—*Elphin.* p. 256.

WARKALLAI, between Cochin and Trevandrum, a spur of the W. Ghats, consisting of a ridge of laterite hills about six miles wide, with a summit level of 180 feet, ending abruptly in a line of cliffs washed by the sea. A tunnel through it has been planned.

WARREN, CAPTAIN JOHN, an officer who served in several parts of the Madras Presidency and in Mysore. He wrote an Account of the Petrifactions near the Village of Trevikera in the Carnatic, in vol. ii. of Asiatic Researches; also Account of Experiments made at the Madras Observatory for determining the length of the simple Pendulum beating seconds of time at that place. He edited the Kala Sankalita.

WAS, which occurs in Allungwas, in the Mahrati, a forsaken village; but in the Gujerati, a ward or quarter of a village occupied by the Koli race.

WASHERMAN'S EARTH, an impure carbonate of soda, on the surface of the ground in many parts of India. The soda is obtained by dissolving in water and evaporating, and the soda is sold under the name of sobbu. A washerman's well is deemed in the east the most impure of all receptacles. These wells are dug at the sides of streams, and give a supply of pure water filtering through the sand.—*Tod's Rajasthan*, p. 223.

WASHING OF FEET. In John xiii. 10, 'He that is washed, needeth not save to wash his feet.' The Hindus walk home from bathing barefoot, and on entering the house wash their feet again.

WASP. The mason wasp is a name given to several genera and species of hymenopterous insects of the family Sphegidæ. One of these, Pelopœus Spinolæ of St. Fargeau, distinguished by its metallic lustre, introduces its eggs into the body of the pupa of some other insect, which it thrusts into keyholes and other apertures of Indian houses, and encloses the whole with moistened earth. The young parasite, after undergoing its transformations, gnaws its way into light, and emerges a four-winged fly. The Ampulex compressa, which drags about cockroaches into which it has implanted its eggs, belongs to the same family.—*Sir J. E. Tennent's Ceylon*, p. 257.

WASSO, in Buddhism, the season of sacred rest. It is still celebrated at Bhilsa by the illumination of the shrine of Lohangi Pir, at his ziarat, on the full moon of Asarh.

WASTE LANDS are abundant in British India, but, owing to the prevalence of the village rights, the family rights, and those of copartnery, it is not easy for a stranger to purchase portions. Lord Stanley, in his despatch of 22d December 1858, ordered such to be sold in fee-simple, and this was agreed upon in resolution of 17th October 1861. On the plains, wherever they are fertile, especially in the provinces drained or watered by large rivers, the population is as high as 600 and 700 to the square mile. But in the hills the population is too scanty to meet the present labour demand, comparatively trifling as it is. The figures refer to acres.

I. HILL WASTES.

Madras. — Coimbatore (Neilgherries), 1,385,845; Salem (Shevaroys), 409,046; Madura (Pulneys), 651,921.

North-West Provinces.—Kamaon, a limited extent suited for tea; Dehra Doon, 204,526; Mahadeo Hills, Gondwana, thousands of square miles; Jubbulpur, 25,180 square miles.

Bengal. — Cossya Hills, Chittagong, Mymensing, Garo Hills, Sylhet, Bhagulpur, Chutia Nagpur, North Cachar, very large area; Kamrup (Assam), 179,560; Nowgong (Assam), 1,205,600; Sibsagur (Assam), 1,471,728; Akyab, 3,152,000; Cachar, 200,000; Darjeeling, 250,000.

British Burma.—Tenasserim, 17,920,000; Martaban, 5,760,000; Pegu, about 40,000 square miles.

Panjab.—Simla, 22,995; Kangra, 16,136; Dehra Ghazi Khan, 24,349; Sealkote, 67,083; Jhelum, 3279; Dehra Ismail Khan, 474,880; Kohat, 16,479; Hoshiarpur, 15,000.

Mysore.—Astragram, 816,619; Bangalore, 547,139; Chittuldroog, 1,365,000; Nuggur, 188,597.

II. WASTES IN THE PLAINS.

Madras.—Ganjam, 12,461; Vizagapatam, 3100; Rajamundry, 172,259; Masulipatam, 2419; Guntur, 479,774; Nellore, 417,221; Cuddapah, 2,536,747; Bellary, 3,458,820; Kurnool, 379,434; Chingleput, 499,075; North Arcot, 426,128; South Arcot, 949,215; Tanjore, 145,316; Trichinopoly, 620,847; Tinnevelly, 785,933.

Bombay.—Sholapur, 414,433; Ratnagherry, 5902; Dharwar, 178,847; Poona, 141,192; Belgaum, 218,542; Satara, 331,315; Ahmadabad, 218,415; Kaira, 73,846; Baroach, 8000; Surat, 95,410; Tanna, 8552; Kandesh, 1,635,666.

North-West Provinces.—Saharunpur, 12,858; Bijnore, 124,368; Shahjahanpur, 56,000; Singrowlee, 34,452; Gorakhpur, 189,508.

Bengal.—Baraset, 5289; Sunderbans, 809,642; Bulluah, 2500; Ramree, 1,200,000; Sandoway, 8000; Bardwan, 680; Hoogly, 139; Midnapur, 3247; Dinajpur, 25,861; Murshidabad, 1189; Bogra, a large tract.

Panjab.—Ambala, 13,917; Jalandhar, 1136; Lahore, 225,057; Gujranwala, 174,357; Ferospur, 399,414; Amritsar, 16,505; Gujerat, 64,196; Shahpur, 574,309;

Multan, 1,510,388; Jhung, 1,737,571; Gugaira, 1,636,242; Muzaffargurh, 17,134; Leiah, 1,750,000; Hissar, 1902; Jhujjur, 11,925; Sirsa, 467; Rhotuck, 2375.

Oudh.—Sitapur, 8500; Durriabad, 5731; Hurdui, 29,327; Baraitch, 98,300; Gunda, 98,340; Mahomdi, 188,045.

Hyderabad and Nagpur.—West Berar, 544,475; East Berar, 565,741; Nagpur, 8; Raepur, 493,384; Chanda, 32,707; Chindwarah, 2000.

The islands of the Mergui Archipelago, and much of the Malay Peninsula, are unpeopled.

WAT, SIND., is made of wheat boiled in milk, and seasoned with salt or sugar, and is the nashtah or morning meal of the peasantry in Sind, eaten as soon as they rise.—*Masson's Journeys*, i. p. 375.

WATCH. The Hindus and Muhammadans in India divide the day into four watches, and the night into the same number, the day being considered to extend from sunrise to sunset. The watches are again divided into ghurees, which are 24 minutes each in length, and which are usually called an Indian hour. As in the summer the days are longer than the nights, each day watch will then be longer than any watch of the night, though, from the necessity of each watch comprising an exact number of ghuree, there will generally be the difference of one ghuree between two watches of the same day. There is much variation in this respect; and although, in the latitude of India, the difference is not so great as it would be in a country more towards the north, it is still so inconvenient that the natives of India rarely understand their own method of dividing the day, and readily adopt the English mode.

WATER.

Maa, ... ARAB.	Ayar, Ayar-tawar, MALAY.
Hu, . . . ASSYRIAN.	Ab, ... PERS.
Ya, ... BURM.	Ku, . . . SCYTHIAN.
Yuh-yih, ... CHIN.	Tanni, ... TAM.
Shwui, Liu-shui, . ,,	Neru, ... TEL.
Eu, ... GR.	Chu, ... TIB.
Pani, ... HIND.	

Water, with the Hindus, is used as a synonym for climate. Ab-o-howa, or water and air, is applied similarly by the Muhammadans. Civilisation, society, government, law, appear to have originated in countries which have certain watering-places or great rivers or perpetual springs, and wells have led men to congregate at particular watering spots. Fountains sacred to the sun and other deities were common to the Persians, Scythians, and Hindus, and both the last offered steeds to him in sacrifice. The Hindu races at the beginning of their religious rites made a preliminary offering of water, called Ankurapana. Few Hindu sects will take water to drink from each other. In Western Gujerat it is customary for Brahmans to use brass or copper vessels belonging to persons of other castes, after they have scrubbed them well with dust and water, and washed them. A leathern bucket need only be washed, because, having come originally from the house of the tanner, who is a person of very low caste, it is supposed that no further defilement can happen to it. Some strict Brahmans, however, will neither drink water which has been drawn in a leathern bucket, nor even use it for ablutions. In parts of Western Gujerat there is frequently but one well in a village, in which case the outcastes draw water on one side of it and retire, and when they are gone Brahmans and other castes come and draw water from the other side. It is usually the case that there are many wells in a village, and that one is specially set apart for out-castes. A well is defiled if a dog or other animal have fallen into it, and, for its purification, water must be drawn from it five times, and Ganges water or cow's urine poured into it. If a Brahman or Wania woman, returning home with water from a well, meet a funeral, she will sometimes throw away the water at once as defiled, sometimes veil herself and move aside, averting her face, and if the corpse be not carried within a few paces of where she stands, the water is preserved from defilement. The dead body of an animal defiles also, and if one happen to lie on the way to the well, no water is procurable until it has been removed, and the ground has been purified. Some women will throw away the water if a crow alight on the vessel and put his beak into it, but as the case is rather a common one, other women take no notice of it. The symbols of the three Hindu deities are respectively time, water, and fire. Besides the well-known worship of the holy Ganges, the tribes worship other rivers under the name of Ganga-amma, and in crossing them it is usual to drop a coin into the water as an offering and the price of a safe passage. In the Dekhan and in Ceylon trees and bushes near springs may often be seen covered with votive offerings. The Khond race also worship rivers and fountains. The people of Sumatra are said to pay a kind of adoration to the sea, and to make an offering of cakes and sweetmeats on their beholding it for the first time, deprecating its power of doing them harm. The offerings on the Ganges to Khaja Khizr are of this character.

In the Panjab four kinds of water are found in the Rewari wells, all of which are used in irrigation, but the produce of each varies. The first is Shirin or Mitha, *i.e.* sweet water, the irrigation from which, in common seasons, does not produce such remarkably fine crops as the other kinds; but this is infinitely more than compensated by the fact that, in drought years, the produce is certain and abundant.

Second, Matwalla or hard water, the land irrigated by which produces very fine crops, except in drought years, when they are rather inferior, though still good and certain.

Third, Malmalla or brackish water, with which good crops but inferior vegetables are produced in common years; in drought, however, both are inferior.

Fourth, Khari, Shor, or very brackish water. This irrigation is said to bear finer and more abundant produce than the others.

Wanklyn and Chapman state that all drinking waters may reasonably be required to be of such a degree of purity as not to yield more than 0·08 millegram of albumenoid ammonia per litre of water, equal to 0·08 parts per million. If not in this state naturally, all water that is to be used for drinking ought to be filtered until it becomes so.

The people of India, and Hindus in particular, have been highly careless of the wells and tanks from which their drinking and cooking waters have been obtained; but in 1883 they printed in 13 languages a lecture which Surgeon-General Furnell gave in Madras. That officer said that excellent laws and regulations had been laid down by ancient lawgivers. He pointed out that

in the Yajur Veda, the part called Arana contains the following commandments:—'Do not spit out with retching in the water. Do not pass urine or discharge excreta in the water. Do not drop blood in the water. Do not throw any hair, or nails, or bones, or ashes, nor dip dirty clothes into water. For to do so is to abuse a precious gift of the gods and disgrace them.'

Then, passing on to the Smriti, or the rules laid down by the lawgivers regarding the use and abuse of water, he showed that the Yagnya Valkya prohibits the drinking of eight kinds of water:—(1) water kept boiled by a stranger, (2) foaming water, (3) heavy dirty water, (4) water giving off offensive smells, (5) water rising in bubbles, (6) hot water, (7) muddy water, (8) salt water.

The sage Shatatapa prohibits bathing in a tank or pond defiled by the following persons by washing or bathing:—Those suffering from sore eyes or itch on the head or ear; those subject to epileptic attacks, or ulceration in the head running off through the nostril, or to consumption; or those affected by leprosy, or small-pox, or diarrhœa, cholera, or other contagious diseases.

In the second book of Ramayana, the Prince Bharata calls down upon himself a curse if he were guilty of something charged against him, by saying,—

> 'His sin, who deadly poison throws
> To spoil the water as it flows,
> Lay on the wretch its burden dread
> Who gave consent when Rama fled.'

In Uddhava Gita of the 11th book of the Bhagavata Purana or Krishna's legend, the divine Krishna advised to drink no other water but that filtered or strained through a clean cloth.

Again, the Yagnya Valkya prohibits the use of water that remains after washing one's feet or hands and other parts of the human body, or the remnant of what another person drinks, or the water near the dhobi's place for clothes, or where chaudala or butchers, chucklers, and other outcastes wash themselves, or where women after child-birth or people under pollution bathe.

All these authorities are taken from the chapter headed Charukanda, or the use of water, in the book of the Hindu law by Vaidyandha, held in high esteem by the Hindu community of S. India.

Dr. Parkes, the greatest authority in hygiene, sums up the department of his manual which treats of water, with the following practical conclusions:—An epidemic of diarrhœa in a community is almost always owing either to impure air, impure water, or bad food; and if it extends over many families, almost certainly to water. Diarrhœa or dysentery constantly affecting a community, or returning periodically at certain times of the year, a very sudden and localized outbreak of either typhoid fever, malarious fever, or cholera, are almost certainly from bad water; and Dr. Macnamara says cholera could be warded off.

The Arabian littoral has a scanty supply of potable water, and at several places, sweeter water, obtained from springs under the sea, is used in preference. Of this a notable instance occurs at Katif town, 25 miles from Bahrein, where, in the open sea, in from 3 to 4 fathoms, are several of such springs.

There are at Bahrein also, in what is called the Inner Harbour, and elsewhere, several submarine springs, which are generally 10 to 12 feet from the sea-surface. But the island population is not dependent on them for its supply, as it has a perennial spring sufficient to keep the whole surface of the island under cultivation. Their fresh water is got by diving. The diver, sitting in his boat, winds a great goat-skin bag around his left arm, the hand grasping its mouth; then he takes in his hand, or stands on, a heavy stone, to which is attached a strong line, and, thus equipped, he plunges in and quickly reaches the bottom. Instantly opening the bag over the strong jet of fresh water, he springs up, at the same time closing the bag. The stone is then hauled up, and the diver, after taking breath, plunges in again. The source of these copious submarine springs is thought to be in the hills of Arabia some 50 or 60 miles distant. To facilitate the filling the water bag, a stone with an aperture in its centre is usually fitted over the mouth of the spring.—*Surgeon-General Farnell; Lubbock's Origin of Civil.* p. 200; *Forbes' Rasamala or Hindu Annals*, ii. pp. 239, 240; *Ward.*

WATER-CRESS, Nasturtium officinale.

Shui-kin-tsai, . . CHIN. | Shwui-kin-tsai, . CHIN.

Leaves—Loot putha. Seeds—Hurufs.

The water-cress is a native of Great Britain. It thrives best in running streams, and is to be had all the year round. It is grown from seed in beds near a water-course, and the supply may be kept up for any length of time. A small black caterpillar is very destructive to it. The only remedy is flooding the plants for a short time.—*Jaffrey.* See Nasturtium.

WATERFALLS. The principal cataracts or waterfalls in India are those near Simorri in Rohilkhand; at Gokak, on the Gutpurba; Yena, in Mahabaleshwar, 600 feet; Cauvery, 300 feet; cataracts of Subunreka, Chutia Nagpur, and Hurrori Ghat, the falls 15, 20, and 400 feet respectively. Waterfalls occur in the course of the rivers Mahanadi, Behur, and Tonse in Gondwana. That on the Mahanadi, 9 miles from Kaiouti, is a fall of 270 feet; the fall on Behur river, near Chechai, is 363 feet; and that on the Tonse, near Tahlurk Ghat, is 210 feet.

The Garsipa falls are on the river Sherwatty, about 15 miles up the W. Ghats from the town of Garsipa. From top of fall to surface of basin is 888 feet, and the depth of basin is 300 feet, and from 300 to 600 feet across during the rains. The country in the neighbourhood is extremely beautiful.

In the Lushai is a waterfall on the Kahu Doong (or Kowa Doong) stream about 1200 feet below Lall Shooma's village, from which it is reached by an easy bridle-path. Above the fall the Kahu Doong is a most beautiful stream, flowing placidly between high banks close to the water's edge, with the luxuriant vegetation peculiar to these parts. From the quiet stream above, the water is suddenly launched over a scarp of some 50 feet into a clear pool on a broad ledge of rock, which has been gradually worn away by the action of water, to receive it. From this pool the stream then plunges over a second ledge, and falls as a sheet of spray and foam into the bottom of an immense amphitheatre of cliffs, surmounted on all sides by high forest-covered mountains; the edge of the scarp, the great fissures which

rend it from top to bottom, the clefts between the strata, and indeed every available nook and cranny, being fringed with festoons of creepers, ferns, and orchids of every variety. The height of this second fall is 350 feet sheer drop without break, and the view from the sharp edge of the precipice, looking down into the great black rock-strewn basin below, is one of the most striking that can be imagined; and during the wet season, when there is a large flow of water, must be one of the finest waterfalls in India.—*Dr. Buist's Catalogue; Jameson's Ed. Jour.*, 1822.

WATER-HEN, Parra Sinensis. Plumes of inferior kinds are made from its feathers. It is met with in the north of India, running over the leaves of the lotus. The best plumes are, however, made from the feathers of the heron of the Panjab. See Wild-fowl.

WATER-LILY, the common name for the species of the family Nymphæaceæ. One of the most beautiful and the largest of the tribe is the Victoria regia.—*Roxb.* See Nelumbium; Nymphæa.

WATER-MELON, Cucurbita citrullus. Citrullus cucurbita, *Schræd.* Si-kwa, Han-kwa, CHIN. The red-fleshed water-melon is largely eaten in China. Liquid night-soil is largely used in the cultivation of melons.

WATERSPOUTS are frequent in the Indian Ocean, the Bay of Bengal, and the Arabian Sea. They generally form a double cone. The upper portion with its apex downwards consists of a dense cloud, while the lower cone, the apex of which is pointed to the heavens, consists of water, which is thus sometimes raised to a height of several hundred feet. Waterspouts seldom last longer than half an hour. Their course and movements are irregular. They are more frequent near the coasts than in the high seas; the wind often prevents the formation of waterspouts. In their stead the windspout shoots up like an arrow, and the sea seems to try in vain to keep it back. The sea, lashed into fury, marks with foam the path along which the conflict rages, and roars with the noise of its waterspouts, and woe to the rash mariner who ventures therein! The height of the spouts is usually somewhat less than 200 yards, and their diameter not more than 20 feet, yet they are often taller and thicker. When the opportunity of correctly measuring them has been favourable, however, as it generally is when they pass between islands of the Eastern Archipelago, so that the distance of their bases could be accurately determined, they have never been found higher than 700 yards, nor thicker than 50 yards. In October, in the Archipelago of Rio, they travel from north-west to south-east. They seldom last longer than five minutes, generally they are dissipated in less time. As they are going away, the bulbous tube, which is as palpable as that of a thermometer, becomes broader at the base, and little clouds, like steam from the pipe of a locomotive, are continually thrown off from the circumference of the spout, and gradually the water is released, and the clouds whence the spout came again close its mouth. There never occur many waterspouts in the Archipelago of Bioun Lingen except during the changing of the monsoon, when almost daily one or more occur. The airspouts near the equator always appear to be more dangerous than the waterspouts. Mr. Jansen says he has seen waterspouts go up out of the water upon the shore, where they overthrew strong isolated frame houses.

WATER WAGTAIL of several kinds occur in India. The grey wagtail is the Motacilla boarula. The lark-toed wagtail, Budytes citreola, occurs in the irrigated fields. The spotted hill wagtail, Enicurus maculatus, is one of the most handsome denizens of the mountain streams. In S. India, the pretty little, clean-looking, sprightly water wagtail is usually the first and most welcome harbinger of the coming cold weather, and remaining in India abundantly whilst the cold season lasts. The pied wagtails of India, Motacilla Luzoniensis and M. Dekhanensis, are specifically different from those of Europe, M. alba and M. Yarrellii, however similar in appearance and habits; but the grey wagtail of Britain, Calobates sulphurea, is identically the same in India and Java, and a specimen has been seen in a collection from Australia. This delicate little bird, so clean and bright in its appearance, is of very general diffusion over Southern Asia during the cold season, being indeed much commoner than in Britain. An individual of the Motacilla boarula is occasionally to be seen. The great pied wagtail, the Motacilla Maderaspatana, is rare. The yellow wagtail lark is the Budytes viridis; the feathers on its head are blue-grey in spring and summer. — *Cal. Rev.; Blyth; Adams.* See Birds.

WATSON. Gheriah was the chief town and strongest port of Angria in 1756. It was attacked and taken by a British squadron of five British ships under Admiral Watson, and on land by an army under Clive. A Mahratta army held aloof.

WATTAL or Watul, in Kashmir, a tribe which supplies dancing girls and prostitutes. The women are among the handsomest of the valley, and are very beautiful. They have all the manners and appearance of gypsies. They live in tents, or rather small huts of thatch, and have no restriction as to food.—*Campbell*, p. 121.

WATTAM. TAM. In Tanjore, a district comprising three or more villages under one headman.

WATTAN. ARAB. A native country. In Western India, a patrimonial inheritance. Watandar, the holder of a hereditary right, a property or office.

WATTLE TREES of Australia are species of Acacia. A. decurrens, black wattle. A. pycnantha, *Benth.*, golden or green wattle.

WAUGH. Major-General Sir Andrew Scott Waugh, F.R.S., of the Royal Engineers, died at the age of 68. He entered the Bengal Engineers in 1827, and assisted in the making of the great Trigonometrical Survey of India in 1832. Three years later he became Astronomical Assistant in his department, and took a leading part under Sir George Everest in the measurement of the great Indian arc for determining the figure and dimensions of the earth. In 1843 he was appointed Surveyor-General of India and Superintendent of the Trigonometrical Survey, and he received the gold medal of the Royal Geographical Society in 1857-58.

WA-WEI, a vegetable poison, used by natives of the Somali coast and others in the interior of Africa for poisoning their arrows. It is an inspissated decoction of the root of a tree which is supposed to be one of the Loganiaceæ or Apo-

cynaceæ. It is used both in hunting and in war, and is said not to be poisonous if swallowed.—*Madras Museum; Captain Playfair.*

WAX.

Shuma, ...	ARAB.	Cera, ...	IT., SP.
H'pa roung, . . .	BURM.	Lelin, ...	MALAY.
Peh-lah (white), .	CHIN.	Wosh, Wosk, . .	RUS.
Hwang-lah (yellow),	,,	Sikthe, ...	SANSK.
Cire, ...	FR.	Miettie, ...	SINGH.
Wachs, ...	GER.	Mellugu, ...	TAM.
Mom, . .	HIND., PERS.	Minum, ...	TEL.

Wax is obtained from different sources, the chief of which is the beehive, where it is made by the bees for the formation of their cells. The insects proceed in a similar manner, and with such celerity, that in a new hive a comb 20 inches long by 7 or 8 inches broad will be constructed in 24 hours, and in 5 or 6 days the hive will be half filled. The wax thus produced is more or less yellow in colour, and has an odour resembling that of honey. The beautiful geometrical form in which it is arranged in the honeycomb is well known. The amount of wax produced in England is very large, but a considerable quantity is likewise imported from abroad. When the wax has served its purpose in the domestic economy of the hive, it is collected for manufacturing purposes by first allowing the honey to drain off or to be pressed out, and then, by repeated boilings and strainings, obtain the product. For obtaining a marketable wax from the combs by a single operation, without either straining or pressing, in an earthen vessel, much narrower at bottom than at top, is placed water and aquafortis, in the proportion of one ounce of the latter to every quart of the former. When these are well blended, as many good wax-combs are put in as will reach, when melted, to within a finger's length of the top of the pan. The pan is then set on a clear fire, and stirred while the wax is melting, and until it has boiled long enough to liquefy the whole completely. It is then removed from the fire, and allowed to cool gradually. The wax then forms into a cake at the top, and the impurities are underneath. These arrange themselves in two layers, the lowest of which consists almost entirely of dross, but the next contains a certain amount of wax. When the cake of wax is turned out of the pan, both these drossy layers are removed, leaving the cake pure; but the upper drossy layer is boiled over again with more combs, and with any scrapings which it may have been necessary to make from the upper surface of the wax in order to leave it quite free from extraneous matters. Old combs that have wax in them, or other descriptions of refuse that have been pressed, but yet retain a considerable portion of wax, are pressed down in a close tub or vessel in a house for five weeks. This causes the impurities to ferment and rot, without affecting the wax, which may then be treated as above described, and will yield a fine yellow wax, little inferior to that of the best combs. Where very great purity is required, the best empty virgin combs are put into the same kind of vessel employed in the proceding process, but with only a quarter of a pint of water, to keep the wax from burning. The pan is then set over a clear fire, and stirred until it boils. At this time a clear yellow froth begins to rise up, which froth is to be skimmed off into a pan placed close at hand. The fire must be so managed that this froth shall continue to rise without boiling over, and a succession of skimmings are thus obtained, which form a very pure description of wax. When no more froth will rise, the residue is turned out into a vessel of cold water, and can be boiled up again with other combs. This method is only available with a fine comb. By the above processes, beeswax is freed from impurities, but is not deprived of its natural yellow colour. For the greater number of uses to which the substance is appropriated, it is, however, necessary that the wax should be rendered perfectly white. This is effected by exposing it in thin ribands on a bleaching ground, where it is subjected to the action of light, air, and moisture, and loses both colour and odour. In India, wax is obtained from the west coast of Africa, Barbary, Malabar, Zanzibar; and in small quantities from the West Indies, United States, Germany, France, etc.—*Waterston; Faulkner; M'C.; Tomlinson; Smith, Chinese M. M.; Poole, Statistics of Commerce; Bagster on the Management of Bees.*

WAX INSECT, Chung-peh-lah and Shu-lah, CHIN., the Coccus pela, *Westwood*, is of a whitish hue when small, but becomes of a dark-brown colour at the close of the season. They are found on certain oleaceous plants, Ligustrum Japonicum, L. lucidum, and L. obtusifolium, and it is the secretion of these insects that the Chinese call peh-lah or white wax. When this insect is fully developed, the trees seem as if covered with flakes of snow. The wax is an article of great value in Chinese commerce, and a portion is exported. From the time of the Mongolian dynasty, in Chinese works white wax is always to be understood as referring to the waxy secretion deposited upon the small branches of several oleaceous trees. The male insect is described in Hanbury's Notes as having large wings and an elongated anal point. The female insect appears to develope its body in such a way as to envelope the twigs of the tree. The Pen Ts'au describes them as about the size of a wood-louse. In the beginning of June they are found upon the small tender branches of the trees, around which they deposit the snow-like wax. In the latter end of August or thereabouts, the wax is carefully scraped off the trees, is melted in boiling water, strained whilst hot, and poured into cold water, when it immediately congeals into a white, opaque, crystalline mass, very much resembling the best spermaceti. If the collection be delayed, the raw wax, called Lah-cha, is inferior. In the autumn, the dark chestnut-coloured insect begins to make a nidus, something like that of the mantis. It is at first no larger than a grain of millet, the whole covering the tree something like fruit. As the spring comes on, these reddish round receptacles become as large as a fowl's head. Each one of these insects lays several hundred eggs. At the beginning of May these collections of eggs are gathered, and wrapped in the leaves of a reed called yoh, the same as the rice dumplings of the dragon-boat festival are wrapped in. They are put upon the proper trees, and by the early or middle part of June they are hatched, and have emerged from the leaves to enter upon their wax-making on the young branches of the trees. The insects have their enemies in the shape of the ants, who climb up the trees and eat their fat friends, unless lime be sprinkled frequently over the trunks of all the

wax trees. These trees are planted upon the banks between fields, or in clumps. Lu-chau-fu in Ngan-hoei, Kia-hing-fu in Che-kiang, Hing-hwa-fu in Foh-kien, Lip'ing-fu and Hing-i-fu in Kwei-chau, Chang-teh-fu, Kwang-chau-ting, Tsing-chau, Yung-shun-fu, Hang-chau-fu, Kwei-yang-chau, and other places in Ho-nan, with several districts in Yunnan and Sze-chuen, are known to supply this wax in large quantities. It is sold in large, flat, round cakes, sometimes carried without any packing; the trade is very extensive in Hankow. The insects and the trees are said to have been originally inhabitants of different parts of the country, until attention was directed to the culture of this wax. It is used in making candles, when mixed with vegetable tallow, also in very small quantities to harden the outer coat of Chinese candles, and is the basis of the black composition used in rubbing off visiting cards, or other simple impressions from small blocks. It is likewise used in making ointments for sores, cuts, and porrigo; a kind of bolus is brought from Canton, called Peh-lah-hwan, and is much prized as a vulnerary and pectoral dose. White wax is used in internal injuries, after accidents, in much the same way as spermaceti was in European pharmacy up to the beginning of the present century.

The insect is raised in Sze-chuen on the Nu-ching trees, L. Japonicum and L. obtusifolium, and also on the Shwai-lah-shu or L. ibota, or species of ulmus. Another tree on which the insect harbours is the Shwui-tung-ts'ing, supposed to be a species of Hibiscus; and a tree called Tien-chu, also called Cau-lih and Pent-sau, a native of Kiang-nang, supposed to be a species of Ornus or Fraxinus. The holly tree, Shwui-kiuh-shu, and the Yuen-chi-hwa tree, are also named as affording shelter to the wax insect.—*Fortune, Residence*, p. 140; *Smith, Mat. Med.; Hanbury.*

WAX TREES. Species of Myrica yield myrtle wax, especially M. cerifera of Louisiana, the berries of which are encrusted with wax. By boiling these in water, a quantity of hard, brittle wax of a pale-green colour is obtained, of the specific gravity of 1·015, the fusing point being 110°. A somewhat similar wax is obtained from M. cordifolia, a shrub of the Cape of Good Hope. The stems and leaves of palm trees also secrete palm wax, which is the hard, brittle, greenish-yellow wax obtained from Rio de Janeiro. It is soluble in boiling alcohol and ether; it fuses at about 163°.

In N. America, M. Pennsylvanica also furnishes a vegetable wax. A vegetable wax is obtained by scraping the trunk of the wax palm of the Andes (Ceroxylon Andicola, *H. B.*). One tree is said to afford about 25 lbs. It is used with tallow in making candles.

A wax is found upon a hard and ligneous variety of the sugar-cane, and is known as sugar-cane wax and cerosine. This is soluble in boiling alcohol, but sparingly so in boiling ether. By boiling the bark of the cork tree, Quercus suber, in alcohol, and distilling off the alcohol, a quantity of yellow crystals are obtained, which form cork-tree wax, which may be purified by repeated solution and crystallization. Nitric acid converts this substance into a peculiar acid, called cerinic acid.

The vegetable white wax of China, called Peh-lah, resembles spermaceti. About £400,000 worth is gathered annually. Baron Richthofen estimates the value of the annual crop, on the average, at about £650,000. In 1879, upwards of £81,000 worth was exported from the one port of Hankow alone. Towards the beginning of winter, small tumours appear on the Ligustrum lucidum trees, which it inhabits, and these increase to the size of a walnut. They are supposed to be the nests of the female insect; they are filled with eggs, which hatch in the spring, and the young insects disperse themselves on the leaves and pierce the bark. The wax they produce begins to appear about June, and is gathered at the beginning of September. It is found from the frontiers of Tibet to the Pacific Ocean, and reared with more or less success, but is chiefly cultivated in Shan-tung province.

In the Kin-chang district, the Ligustrum lucidum thrives in abundance. It was accidentally discovered that, by transporting the insects from their native districts to Keating-fu, in the north of the province, their capability of discharging wax was largely augmented, which was availed of by the Sze-chuen traders. The period between morning and evening is chosen for conveyance, because many hours of sunlight would precipitate the hatching. This should take place only after the females have been attached to the trees. Arrived at their destination, six or more of the mothers are tied, wrapped in a palm leaf, to a ligustrum. A few days later the young flies are swarming on the twigs, where they fulfil their mission by the month of August. Then they perish in the caldrons, where the results of their brief existence are collected. It is said that this peculiar industry requires the exercise of great care, forethought, and experience.

In China, a vegetable wax is obtained from the Stillingia sebifera. Dr. Rawes says the seeds are picked at the commencement of the cold weather, in November and December, when all the leaves have fallen from the trees. The seeds are put into a wooden cylinder, open at the top, but with a perforated bottom. This is placed over an iron vessel containing hot water, and when the seeds have steamed 10 or 15 minutes, they are thrown into a large stone mortar, and are gently beaten by two men with stone mallets, for the purpose of detaching the tallow from the other parts of the seed. They are then thrown upon a sieve, heated over the fire, and sifted; by which process the tallow is separated, or nearly so, although they generally undergo the process of steaming, etc., a second time, that nothing may be lost. The other part of the seed is ground and pressed for oil. The tallow now resembles coarse linseed meal, and derives its brown colour from the thin covering over the seed (between it and the tallow), which is separated by the pounding and sifting. In this state it is put between circles of twisted straw, five or six of which are laid upon each other, and thus forming a hollow cylinder for its reception. When this straw cylinder has been filled, it is placed in a press of longitudinal beams of considerable thickness, placed about 1½ or 2 feet asunder, with a thick plank at the bottom, forming a kind of trough, and the whole is bound together with iron. The tallow is pressed out by means of wedges driven in very lightly with stone mallets, and passes through a hole in the bottom

of the press into a tub, which is sunk there to receive it. It is now freed from all impurities, and is a semi-fluid of a beautiful white colour, but soon gets solid, and in cold weather is very brittle. The inside of the tubs which collect the tallow are sprinkled or dusted over with a fine red earth, well dried, which prevents the tallow from adhering to their sides. It is thus easily removed in a solid state from the tubs, and in this condition the cakes are exposed for sale in the market. As the candles made from this vegetable tallow have a tendency to get soft and to melt in hot weather, they are commonly dipped in wax of various colours, as red, green, and yellow. Those which are intended for religious purposes are generally very large, and finely ornamented with golden characters. The cake or refuse which remains after the tallow has been pressed out of it, is used for fuel or to manure the land, and so is the refuse from the other part of the seeds from which oil is extracted. Stillingia sebifera grows luxuriantly in the Dehra Doon and Lower Himalaya, and in the Kohistan of the Panjab. There is an interesting paper on it by Dr. Macgowan in vol. vii. p. 164 of the Journal of Horticultural Society of India. It flowers in June and during the rains. In addition to the tallow obtained from its seeds and used in making candles, a black dye is obtained from its leaves.

Dr. James Anderson, who lived early in the 19th century, is said to have written about a white wax occurring near Madras, but nothing of the kind is now known.

In Sumatra, a winged ant is said to produce a grey wax, which was exhibited at the French Exposition of 1855.—*Dr. J. L. Phipson; Voigt; Roxb. Ind.* iii. p. 693; *Dr. Rawes; Eng. Cyc.; Williams' Middle Kingd.* pp. 107–282; *Fortune's Wanderings*, p. 67; *Smith; Hanbury*, p. 64. See Dryandra cordifolia; Oils.

WAX, VEGETABLE. This term has recently been applied to solidified oils. Mr. Edward Loarer discovered a mode of fabricating a substance which he named vegetable wax, from its resemblance to that animal product, and he obtained a patent for it under Act vi. of 1856 of the Government of India. He manufactured about 200 tons, which brought various prices, but the latest selling price at Havre was about £43 per ton of 1000 kilogrammes, or 2200 English lbs.

Candles can be prepared of this material; and the power of bleaching it is possessed in Europe. The vegetable wax is made from the common lamp oil (castor-oil) of the country, the plant producing which is grown throughout the length and breadth of the Indian empire, springing luxuriantly even on bare, rocky soils; affording, therefore, exhaustless supplies of the raw material for the wax.

By one of Mr. Loarer s processes about 100 lbs. of oil were congealed in 8 hours; only one ingredient (sulphuric acid) was used, and that only in very small quantity, 16 ounces sufficing for obtaining 100 lbs. of vegetable wax. This process is admirably adapted to the country, and may be adopted by the ryots without any difficulty.

Another process, in which both nitric and sulphuric acids are used, is the best adapted for manufacture on a large scale; by this process, 400 lbs. of oil were congealed in a wooden trough in four days; and Mr. Loarer suggested an arrangement and described an apparatus which would make this process of preparing vegetable wax on any scale very simple. The manufacture of vegetable wax can be generally introduced into India, thus enabling the grower of castor and other similar oil-seeds to carry oil to market in a solid and consequently more portable state. At present the carriage of fluid oils is not only difficult but costly.

This vegetable wax has the advantage of being easily stored, and transported from the interior on the rudest conveyance and in the simplest and cheapest form; it can be loaded upon carts, on bullocks, or in any way best adapted to the habits of the people, and sufficiently protected from injury and from weather by the ordinary leaves and mats of the country, requiring neither casks, dubbers, nor boxes to convey it. It can further be solidified into any portions or shapes; and on board ship can be stowed in any convenient corner, requiring no protection against leakage or bilge water, and by its nature it can be packed so close that no danger from shifting of cargo or injury to the article from rubbing need be apprehended.

Illipoo oil produces with great facility a perfectly white substance of the consistency of good tallow. Illipoo oil is with great advantage mixed with castor oil for the manufacture of vegetable wax, and as illipoo oil has always fetched a very low price in the Madras Presidency, the discovery of this property renders it very valuable.

Margosa oil, the oil of species of Azadirachta and Melia, produces a vegetable wax as hard as any made from the best lamp oil, and of a light saffron colour. Margosa oil has always been sold in the Madras Presidency at a very low price, but its supply has never reached what it could attain should this oil become saleable. Margosa as well as illipoo oil, mixed with an equal quantity of cold-drawn castor oil, produces a hard vegetable wax of an agreeable roseate colour.

WAY-THAN-DARA, a Burmese story of one of the former existences of Gautama, in which he exemplified the great virtue of almsgiving. It is one of the most affecting and beautifully written compositions in Burmese. The prince Way-than-dara gives away all his possessions, and at length even his children.

WAZEEFA. Arab. A stipend; land allotted for the support of Muhammadan shrines.

WAZIRI, a brave, active, warlike, but aggressive and predatory race in the mountains on each side of Bannu and Dour. They occupy all the hill tract from Kuram and the Miranzai to the Gomal and Goleri pass, south of Tank. They hold both sides of this pass, which is the great route by which the trade of Afghanistan and Central Asia passes into India. Between the Miranzai and Bannu valleys, the hills of the Waziri project into British territory and approach the Bahadur Khel salt mines, from which they are separated by the Latammar pass. Its numerous tribes are estimated to muster 20,000 to 30,000 men. They had made repeated inroads on the Bannu valley, and in the cold weather of 1859–60 an expedition scoured their valleys to coerce them into submission. They are still, however, more or less independent. The Waziri are divided into three great divisions, or Usman Khel, Ahmadzai, and

Mahsud. Their country extends from the south of the Kohat district down to Tank, opposite Dehra Ismail Khan; towards the north they are bounded by the Afridi country, and towards the south by the tribe of Badranian; Bannu frontier is the habitat of the Ahmadzai. These are divided into six sections, which again are subdivided into numerous smaller clans. One of these sections is called Sperkye; it has two divisions, the smaller of which goes by the name of Muhammad Khel, and numbers about 250 fighting men; they live in the hills on both sides of the river Kuram, and since A.D. 1850 a number of them settled in British territory. They till their lands in the cold season, and during the summer months the greater portion of them retire to the hills, leaving a few to look after their fields. The other sections of the Ahmadzai are located in British territory on the t'hul between Bannu and Latammar; they generally go by the name of T'hul Waziri. The Waziri country, in its southern part, has the lofty mountain Kussai Ghar, of which the Takht-i-Sulaiman is the highest peak. The Waziri, although notorious robbers, in common with other lawless tribes, regard the descendants of Mahomed with awe and a feeling of respectful reverence, and esteem themselves fortunate to receive their benediction, and other little aids their superstitions teach them to think essential. They are haughty and bloodthirsty towards strangers, prone to plunder, and careless about blood-shedding; are plain spoken; and though inclined to be boastful and rough in council, are true to their friends. They have never owned any allegiance to Kābul.—*Masson's Journey*, i. p. 101; *Vigne, A Personal Narrative*, p. 83; *Our Panjab Frontier; MacGregor.*

WAZU. ARAB., HIND., PERS. The Muhammadan legal washings of the face, hands, and feet. The Muhammadan purification before prayers.

WEASELS are arranged by naturalists under the genus Mustela, of the family Mustelidæ, and there are known in India M. kathiah, *Hodg.*, the yellow-bellied weasel of the Himalaya and Nepal; M. strigidorsa, *Hodg.*, the striped weasel of Sikkim; M. Horsfieldii, *Gray*, of Bhutan; M. temon, *Hodg.*, of Tibet; M. canigula, M. nudipes, *F. Cuv.*, of the Malay Peninsula and Java; M. sarmatica, *Pallas*, of N. and Central Asia and Afghanistan. Mustela subhemachalana, *Hodg.*, the Himalayan weasel, occurs throughout the Himalaya from Kashmir to Darjeeling. Its total length, including tail, is 19 inches; colour, a uniform light-brown, darker on the back; nose, mouth, and throat white; tail lax and tapering. This handsome little creature is not uncommon in the valley of Kashmir. M. erminra, the stoat or ermine, is stated to occur in Nepal and in the lower and middle regions of the W. Himalaya. M. Sibirica, *Pallas*, occurs in China.—*Adams; Jerdon.*

WEAVER BIRDS of India are of the genus Ploceus. P. baza hangs its pendulous dwelling from a projecting bough, twisting it with grass, often lemon grass, into a form somewhat resembling a bottle with a prolonged neck, the entrance being so situated as to baffle the approaches of its enemies, the tree snakes and other reptiles. Its large purse-shaped nest would fall an easy prey to its enemies, did not the little architect, with surprising intelligence, place it in situations not easily accessible; hence several may be seen suspended from the tips of branches overhanging deep wells, or on the topmost boughs of acacia and thorny trees. The weaver bird builds in societies, and is docile and familiar in its habits. The nests are used for stuffing elephants' pads.

WEAVING is an art that has existed in India in all its perfection from the earliest period of which there is any record. In the Institutes of Menu, compiled perhaps 1400 years before the Christian era, weaving is spoken of as a familiar handicraft. That the product was woven cloth of cotton or silk or wool, is shown by Menu (Institutes, ch. viii. ver. 30), who says: 'Let a weaver who has received ten palas of cotton thread, give them back increased to eleven by the rice water and the like used in weaving. He who does otherwise shall pay a fine of twelve panas.' It appears, therefore, that 'size' was used in the process as it is at present. And in ch. v. it is further directed that 'silk and woollen stuffs are to be washed or purified with saline earths, and cloths by washing or sprinkling.' We have thus evidence of the existence of silk, woollen, and cotton cloths; and in ch. x., among articles which Brahmans are prohibited to sell, 'all woven cloth dyed red, cloth made of Sana or Kshuma bark (whatever that may have been), and of wool, even not red,' are enumerated. No trace of linen cloth made from flax is to be found in Menu or any of the earlier works of the Hindus; and it is probable that flax had never been made from the linseed plant for the manufacture of yarn for weaving.

The great epic poem the Ramayana, possibly as old as 1200 to 1400 years B.C., affords very distinct evidence of the existence of silk cloths. It is mentioned that when the brides of Rama and his brothers returned home, their mothers-in-law, 'sumptuously clad in silk, hastened to the temples of the gods to offer incense,' etc.

Actual knowledge of the fabrics produced by the most ancient looms is gained from the specimens yielded by the mummy pits of Egypt. For burial purposes linen alone was there employed, on account both of its cleanliness and its lasting qualities. Linen formed the special dress of the priests, it being the symbol of purity, and not liable, like woollen garments, to be infested with insects or parasites. There are samples in the British Museum very fine in texture, the finest being found woven with threads of about 100 hanks to the pound, with 140 threads to the inch in the warp, and 64 in the woof. The Egyptian priests were also partial to cotton dresses, which were supplied to them by the Government, as the Rosetta stone distinctly mentions. Cotton and wool were worn by the upper classes of society; wool alone by the poorest. The garments of the priests and higher ranks among the Hebrews were of fine linen; the references to silk in the English version of the Bible being an undoubted mistranslation. There is no evidence of silk having been known to the Hebrews or Assyrians.

In the representations of the Egyptian loom at Thebes and elsewhere, the loom is vertical, and the weaver is seen throwing the weft through the warp by means of a rod, at the end of which there is a hook, probably for drawing back the shuttle with the weft. The Indian loom is very like this in principle, only horizontal; doubtless the same which has been in use from time immemorial, and

which probably passed through Persia or some other channel at an early period into Europe. Mediæval drawings, such as that copied by Montfaucon from the MS. Virgil of the Vatican, commonly assigned to the 4th century, show a modification of this pristine model. The Chinese silk loom, however, presents a striking contrast to these simple machines in point of inventiveness and complexity, coming near the best specimens of the modern hand-loom. Aristotle gives the earliest historical notice of silk, which in all probability spread from China westwards, and came into extensive use concurrently with the growth of wealth and luxury in Greece and Rome.

The fabrics woven in India now are probably not much altered in character from what they were in the time of Menu; and the looms, simple and apparently rude in construction, are, under their wonderful power of manipulation and unwearying patience, capable of producing some of the finest, most elegant, and most costly fabrics in the world. The frame of the loom in Bengal is almost on the ground, and the weavers, sitting with their feet hanging down in a hole cut in the earth, carry on their work. A loom usually forms part of a Burman's household furniture, and it is worked by the women. The cloths are rough but strong, and some of the silk goods are of considerable value. Waistcoats for men, petticoats for women, and coverlets are usually woven.

The weavers of India are alike of the Hindu and Muhammadan religions, and in the rural parts of the country nearly all the aboriginal races and many of the Sudra Hindus occupy the slack season of their field work in weaving coarse cottons and woollen fabrics. An investigation by the Madras Board of Revenue in 1870 showed an increasing extent of weaving; and in the year 1881, workers in cotton, flax, silk, and wool, in India numbered 3,114,082 souls. The people of moderate means are now largely using the piece-goods of Europe and America, but the finest and coarsest products are still produced from the Indian looms. Yarns and twists are largely imported, and employed in the manufacture of the textile fabrics which meet the particular wants of the natives.

Divisions of the weaver caste in Telingana are Pursala wanloo, Sumsala wanloo, Puttanasala wanloo, and Sala wanloo.

Zunlozi, weavers of the wonderfully beautiful patterns of gold and silver tissues, plain and figured, with and without admixture of silk or cotton, in flowers and patterns; gold and silver tissue lace of all breadths and patterns, used for trimming scarfs and for bridal dresses; larger scarfs of muslin and tissue combined, as those of Benares; and that wonderful cloth of gold called kimkhab, which is without parallel in the ornamental manufactures of the world. People of all ranks indulge in raiment gorgeous according to their means. The poorest marriage trousseau has some tissue or trimming, and the wealthier people make great use of brocade and tissue scarfs, shawls, and turbands. The chief localities of manufacture are Benares, Burhanpur, Aurangabad, Murshidabad, Dehli, Arcot, and Mysore. The workmen are usually Muhammadans.

At Bangalore, the descendants of the old court weavers still manufacture a peculiar kind of cloth, printed in red and black with mythological designs. In the Bombay Presidency, Ahmadabad, Surat, and Baroach are the chief centres of the manufacture of printed sarees, for which Gujerat is celebrated; while Poona, Yeola, Nasik, and Dharwar produce the fabrics dyed in the thread, which are much worn by the Mahratta races.

Spinning of yarn for weaving is practised by all classes of women in India; even the highest at one time used to amuse themselves with the spinning-wheel. Among the agricultural classes the occupation is constant, or fills up time not required for other household occupations. At the latter part of the 19th century, the imports of yarn into British India had increased enormously, and the weavers had also largely increased. The spindle in use is not much thicker than a stout needle. It is from 10 to 14 inches in length, and attached to it, near its lower point, is a ball of unbaked clay to give it weight in turning. The spinner holds it in an inclined position, with its points resting on a piece of shell, and turns it between the thumb and forefinger of one hand, while she at the same time draws out the single filaments of cotton from the roll of cotton in the other hand, and twists them into yarn upon the spindle. Dryness of the air prevents the filaments of cotton from being sufficiently attenuated or elongated, and is therefore unfavourable to the spinning of fine yarn. A certain degree of moisture, combined with a temperature of 82°, is the condition of the atmosphere best suited to the carrying on of this operation. The Dacca spinners usually work from soon after dawn to 9 or 10 o'clock, and from 3 or 4 o'clock in the afternoon till half an hour before sunset. The finest yarn is spun early in the morning, before the rising sun dissipates the dew on the grass; or, when this is wanting and the air is unusually dry, it is not unfrequently made over a shallow vessel of water, the evaporation from which imparts the necessary degree of moisture to the filaments of cotton, and enables the spinner to form them into thread. As a proof of the fineness of the yarn thus delicately spun, Mr. Tayler mentioned that one skein which was carefully weighed, proved to be at the rate of 250 miles in length to the pound of cotton.

Dr. Watson has given the result of microscopic examinations of French, English, and Dacca muslins in an elaborate table; and he reports that the diameter of the Dacca yarn is less than that of the finest European; that the number of filaments in each thread is considerably smaller in the Dacca than in the European yarns; that the diameter of the ultimate filaments or fibres of which the Dacca yarn consists is larger than the European; and that the superior fineness of the Dacca yarn depends solely on the fact that it contains a smaller number of filaments. These causes—combined with the ascertained result that the number of twists in each inch of length in the Dacca yarn amounts to 110·1 and 80·7, while in the British it was only 68·8 and 56·6—not only account for the superior fineness, but also for the durability of the Dacca over the European fabric. At Nandair on the Godavery, at Muktul, Dhanwarum, and Amarchinta in the Nizam's dominions, and at Arnee near Madras, muslin which rivals that of Dacca is made in considerable quantities. In these localities the process of spinning by the spindle is the same as that of Dacca; but as the climate is drier, the spinners, who are both men and women, work in partially

darkened rooms, the floors of which are watered to produce the necessary amount of moisture. The hand-spinning of fine thread used for Brussels lace, according to Mr. Palliser's account of it, is spun by women in darkened rooms.

The manufacture of muslins of such qualities as are produced at Dacca, and indeed in Europe, must necessarily be always of a very limited character, and their use confined to very rich purchasers. For the masses of the people, the British manufacturer sends to India the plain and striped duria, mulmul, aghabani, and other figured fabrics, which have established themselves there, and which, both from their good quality and moderate prices, are acceptable to the numerous classes who make use of them. Some of the chintzes of Masulipatam and of the south of India are as beautiful in design as they are chaste and elegant in colour. Printed cloths are worn occasionally, as in Berar and Bundelkhand, for sarees; and the ends and borders have peculiar local patterns. There is also a class of prints on coarse cloth, used for the skirts or petticoats of women of some of the lower classes in Upper India; but the greatest need of printed cloths is for the kind of bedcover called palampore, or single quilts.

In the costlier garments woven in India, the borders and ends are entirely of gold thread and silk, the former predominating. Many of the sarees, or women's cloths, made at Benares, Pytun, and Burhanpur in Gujerat, at Narrainpet and Dhanwarum in the Hyderabad territory, at Yeokla in Kandesh, and in other localities, have gold thread in broad and narrow stripes alternating with silk or muslin. Gold flowers, checks, or zigzag patterns are used, the colours of the grounds being green, black, violet, crimson, purple, and grey; and in silk, black shot with crimson and yellow, crimson with green, blue, or white, yellow with deep crimson and blue, all producing rich, harmonious, and even gorgeous effects, but without the least appearance of or approach to glaring colour or offence to the most critical taste. They are colours and effects which suit the dark or fair complexions of the people of the country; for an Indian lady who can afford to be choice in the selection of her wardrobe, is as particular as to what will suit her especial colour—dark or comparatively fair—as a lady of England or France.

Another exquisitely beautiful article of Indian costume for men and women is the do-patta or scarf, worn more frequently by Muhammadan women than Hindu, and by the latter only when they have adopted the Muhammadan loongee or petticoat, but invariably by men in dress costume. By women, this is generally passed once round the waist over the petticoat or trousers, thence across the bosom and over the left shoulder and head; by men, across the chest only. Do-pattas, especially those of Benares, are perhaps the most exquisitely beautiful of all the ornamental fabrics of India; and it is quite impossible to describe the effects of gold and silver thread, of the most delicate and ductile description imaginable, woven in broad rich borders, and profusion of gold and silver flowers, or the elegance and intricacy of most of the arabesque patterns of the ribbon borders or broad stripes. How such articles are woven at all, and how they are woven with their exquisite finish and strength, fine as their quality is, in the rude hand-looms of the country, it is hard to understand. All these fabrics are of the most delicate and delightful colour: the creamy white, and shades of pink, yellow, green, mauve, violet, and blue are clear yet subdued, and always accord with the thread used and the style of ornamentation, whether in gold or silver, or both combined. Many are of more decided colours,—black, scarlet and crimson, chocolate, dark green, and madder; but whatever the colour may be, the ornamentation is chaste and suitable. For the most part, the fabrics of Benares are not intended for ordinary washing; but the dyers and scourers of India have a process by which the former colour can be discharged from the fabric, and it can then be re-dyed. The gold or silver work is also carefully pressed and ironed, and the piece is restored, if not to its original beauty, at least to a very wearable condition. The do-pattas of Pytun, and indeed most others except Benares, are of a stronger fabric. Many of them are woven in fast colours, and the gold thread—silver is rarely used in them—is more substantial than that of Benares. On this account they are preferred in Central India and the Dekhan, not only because they are ordinarily more durable, but because they bear washing or cleaning better. In point of delicate beauty, however, if not of richness, they are not comparable with the fabrics of Benares. Scarfs are in use by every one,—plain muslins, or muslins with figured fields and borders without colour; plain fields of muslin with narrow edging of coloured silk or cotton (avoiding gold thread), and narrow ends. Such articles, called 'sela' in India, are in everyday use among millions of Hindus and Muhammadans, men and women. They are always open-textured muslins; and the quality ranges from very ordinary yarn to that of the finest Dacca fibres.

The textures of the dhoti, saree, loongee, manufactured in Britain and sent to India, are in general too close, too much like calico in fact, which makes the garment hot, heavy in wear, and difficult to wash. The surface becomes rough and 'fuzzy' in use, from which the native fabric remains free. Comparatively few native women of any class or degree wear white; if they do wear it, the dress has broad borders and ends. But what all classes wear are coloured cloths,—black, red, blue, occasionally orange and green, violet, and grey. All through Western, Central, and Southern India sarees are striped and checked in an infinite variety of patterns. Narrainpet, Dhanwarum, and Muktul in the Nizam's territories; Gudduk and Bettigherry in Dharwar; Kolhapur, Nasik, Yeokla, and many other manufacturing towns in the Dekhan; Arnee, in the south, and elsewhere, send out articles of excellent texture, with beautifully-arranged colours and patterns, both in stripes and checks. For the costly and superb fabrics of cloths of gold and silver (kimkhab), and the classes of washing satins (mushroo and hemroo), the gold and silver thread is simply the result of skilful and delicate manipulation. The gold and silver cloths (kimkhabs) are used for state dresses and trousers, the latter by men and women; and ladies of rank usually possess petticoats or skirts of these gorgeous fabrics. Mushroo

and hemroo are not used for tunics, but for men's and women's trousers and women's skirts, as also for covering bedding and pillows; they are very strong and durable fabrics, wash well, and preserve their colour, however long worn or roughly used. They can hardly be compared with British satins, which, however, if more delicate in colour and texture, are unfitted for the purposes to which the Indian fabrics are applied. Many of the borders of loongees, dhotis, and sarees are like plain silk ribbons, in some instances corded or ribbed, in others flat.

The manufacture of Kashmir shawls is not peculiar to that province. Those formerly issued from that province were exquisitely woven, with unrivalled elegance and chasteness of design, softness and finish, in quality, arrangement of colours, and use of dyes which the finest Paisley and French shawls do not approach. The exquisite shawls of Kashmir grow rarer and rarer every year, and their place has been usurped by hand-embroidered fabrics of lower value, with more showy and more vulgar patterns. In the Panjab and Dehli, of late years, workmen have commenced to embroider Kashmir cloth and net with floss silk and braid, but solely for sale to Europeans, who wear them as tunics, jackets, scarfs, and the like. In the hand-worked Kashmir shawls, as also in the Dehli work, wooden needles of hard wood are used, slightly charred, with a hole in the centre of the needle to receive the yarn.

The Muhammadan weavers of India produce plain muslins, such as turbands, scarfs, the loongees or waist-cloths worn only by Muhammadans, and coarse cloths, called jote and khadi. They seldom weave coloured yarn, except for loongees, and pieces of soussi, a fabric somewhat coarse but very durable, used by women for petticoats and trousers. They are strict in their religious observances. They marry among their own body. Hindu weavers are of different degrees of caste; those of Northern India are termed Kori or Koreya, and have several divisions who eat meat and drink spirits. The non-Aryan Koli also weaves a coarse cloth; as also the Julai, a Sudra race found all over India. They weave plain as well as coloured fabrics, fine goods, turbands, scarfs, bodices, or silk or cotton or mixed sarees, or women's cloths, and dhotis or men's cloths. The manner in which they arrange their colours and weave stripes and checks, with broad borders of figured silks, evince great practical knowledge of and perfection in their art.

The rumal, used as a cloth for the head, is of cotton or of silk.

The saree of women is of silk, or of plain white, striped, and flowered muslins, with silk borders and ends, plain, or with gold thread. They are of comparatively loose, open texture, soft and pliable, and when worn as an entire garment, they fall gracefully to the shape, and are readily adjusted.

Ordinary cloths woven in India are the dhoti, do-patta, and loongee waist-cloths of cotton worn by Hindu men.

Soussi is a somewhat coarse cotton fabric, used by Muhammadan women for petticoats and trousers, also for covering cotton mattresses and other like purposes.

The thread or yarn from which the manufactures of Narrainpet, Dharwar, Muktul, Amarchinta, and Gudwal are woven, is spun in the adjoining districts. The spinners are Dhers, who are unrivalled in this branch of industry. They purchase the cotton in the seed, which is the produce of Shorapur and the country around, and it is cleaned entirely by the hand, as the use of a churka or other cleaning implement they allege breaks or injures the fibre. The spinning-wheel has a large circumference, and is in some instances worked by a treadle, and the spinning is carried on in a close room, from which wind is carefully excluded. The perfection of the cotton manufactures of Narrainpet, Dharwar, and Muktul, as well in regard to colour as texture, is attributed by the native weavers to the quality of the water, in regard to which they are most particular, and to the clays and earths obtainable near those places in which the thread is washed after its long oil process. The water is represented as hard and unfit for culinary purposes or washing, yet without salt, and which, in washing the thread, and brushing it as stretched on the loom, contracts the fibre and renders it clean and smooth in working. There can be no doubt of the permanency of the colours, and that all the madder reds and browns improve with washing. It is of essential importance to use none but permanent colours, as any others subjected to the rough treatment of Indian washermen would speedily fade or change. The silk dyes are perhaps less permanent than the cotton, but still they last many years, and bear frequent washing.

The Kori or Koreya are Hindu weavers of Northern India. The Tanti weavers are also Hindus. In the Chutia Nagpur province of Bengal there are about 50,000 of helot weaver races, besides whom are thousands of weavers in the Pan or Panwa, Ganda, and Chik of the southern Tributary Estates, and the Pab and Panika of the western districts have features rather of Hindu form than Kolarian or Dravidian.

Thoughout British India Hindu weavers are considered a low caste, and to escape from this position many of them have embraced Muhammadanism, and are called Julai or Julaha. Momin, in Arabic a true believer, is a name often applied to Indian Muhammadan weavers.—*Ed. Rev.*, July 1867; *Ward*, iii. p. 126; *Dr. Watson.* See Arts and Manufactures.

WEBERA CORYMBOSA. *Willd.*

Stylocoryne Webera, *Sch.* | Rondeletia Asiatica, *Linn.*
Kunkra, . . . BENG. | Terana pullum, . . TAM.

The fruit of this plant, a small black berry, is eaten by poor people. It is a beautiful shrub, which is rarely seen in low lands or in cultivated districts. Dr. Roxburgh, i. p. 696, described W. corymbosa, macrophylla, odorata, oppositifolia, and scandens.—*Ainslie; Roxb.*

WEBERA TETRANDRA. *Willd.*

Canthium parviflorum, *Lam.*

Kandan karra, MALEAL. | Sengarary, . . . TAM.
Naga valli, . . SANSK. | Balusu kura, . . . TEL.
Karai, ... TAM.

Found as a small shrub on many of the barren wastes of the Dekhan, and on hill ridges, with a dark-coloured, hard, and pretty wood, good for turning small objects. In a verse of the Bharata, where Krishna, having been fed by a hunter or savage, his attendant asks, 'Is the Balusu kura

which you received from Panchalikudu equal to saiyodanam (fine rice) apupa (cakes), saka (vegetables), supam (pulse)?' It is a common proverb also, 'Whilst life remains, I can subsist on the leaves (kura) of the Balusu;' implying submission to any necessity however grievous. A decoction of the leaves and bark is prescribed in certain stages of flux cases, and the root is supposed to have anthelmintic qualities. The leaves and fruit are eaten as greens.—*Wight; Gibson; Beddome, Fl. And.*

WEDELIA CALENDULACEA. *Nees.*

Verbesina calendulacea, *L.*	Jageria calendulacea, *Spreng.*
V. Bengalensis, *Pers.*	
Kesho-rej, . . BENG.	Pastale kaiantagerei, TAM.
Pilabhungra, . DUKH.	Patsu pulagunta gali-jeru, ... TEL.
Keshuria, . . . ,,	
Pi kajoni, . . . MALEAL.	

This perennial plant grows in the south of India, has a slight turpentinous taste, and is used in medicine.—*Roxb.* iii. p. 440.

WEEK, this division of time is recognised by Jews and Christians and Muhammadans, their religions requiring them to set apart the Sabbath and the Sunday and Friday. The Arab and Persian Muhammadans reckon their days as first, second, etc., designating Friday as the Jama day of assembly, and Saturday as the Haftah or 'week.' The Urdu names are Aitiwar, Pir, Mangal, Charshambah, Jumarat, Juma, and Awal Haftah. Hindus, until comparatively recent times, reckoned their days by the increasing and the waning moon, but have copied the Christian (or Roman) mode, and translated the names into their respective tongues. Tamil speakers name the seven days of the week from the sun, the moon, and the five principal planets. They observe the order of the apparent distances of the planets from the earth:—

Saturn . . .	Sani	Saturday.
Jupiter . . .	Viyazam . .	Thursday.
Mars . . .	Sevval . . .	Tuesday.
Sol	Nyayarn . .	Sunday.
Venus . . .	Velli . . .	Friday.
Mercury . .	Budan . . .	Wednesday.
Moon . . .	Tingal . . .	Monday.

Each hour, according to Hindu notions, being ruled successively by a planet, by counting the 24 hours of a day by each planet belonging to it in the above order (which is that of their apparent distance from the earth), it will be found that each day is named by the planet which governs its first hour. The first 25th hour is the first hour of the first day of the week, Sunday (Nyayarn), and counting with the 25th as the first of the second series of 24 hours, the next 25th will give the moon for Monday (Tingal), and so on for the rest of the week.—*Indian Statesman.*

WEEPING WILLOW, Salix Babylonica, probably of West Asiatic origin, now everywhere in cultivation.

WEEVILS. The family of the weevils is one of the most extensive amongst the beetles, and in Europe many of its members do much injury to agricultural produce. Mr. Nietner had seen nearly the whole sweet potato (Batatas edulis) crop of the Negombo district of Ceylon destroyed by one of them, the Cylas sturcipennis. The common rice weevil, Sitophilus oryzæ, is another instance; and one of the cocoanut tree destroyers of the Ceylon low country, the Sphænophorus planipennis, belongs also to this family. The Arhines? destructor, a beautiful green weevil, Mr. Nietner had not found do any injury to coffee trees; but Mr. J. Rose of Matturatti, writing to him, says the mischief they do is plentiful, and if they were as plentiful as the bug they would be the planters' worst enemies. 'Five or six acres were completely covered with them, and they consumed almost every leaf. Year after year they appeared upon the same place. One year they appeared upon a neighbouring estate in great force, and overran at least 40 acres. The same thing occurred on three other estates.'

There are two corn weevils, of the order Coleoptera, family Curculionidæ, and genus Calandra, the Sitophilus of Schönherr. Calandra oryzæ, the rice weevil, infests also wheat. It has a pair of serviceable wings. C. granaria, *Linn.*, the granary weevil, injures stored corn; in Britain has no wings. They pair from April to August, the warmer it is the oftener they propagate. Heating the grain to 135° is said to destroy them. If unscoured wool be mixed with the grain, the insects are attracted into it and perish. Lime-washing the walls and frequent stirring are preventives.

The leaves of the Azadirachta Indica or nim prevent the weevil attacking grain. If a few leaves be put in the barn with each waggon load of corn, maize, or wheat, and some scattered between each tier of sacks of grain when loading a ship, the grain put up in it will be preserved for years. Half a bushel of black salt, mixed with a hundred bushels of wheat, rice, or other grain, prevents the black weevil.

WEI. CHIN. A term applied to several underground rhizomes. Wei-jui or Yuh-chuh, CHIN., is a drug used as an antiperiodic; it is the root of a leguminous plant.

WEIGHTS AND MEASURES.

Mikyal, Kayl, . . ARAB.	Aiyar, Kobin, . . PERS.
Wasnat, Kal, . . ,,	Peiman, ... ,,
Taul, Map, . . . HIND.	

The ancient linear measures of the Egyptians and the Jews were taken from a unit representing the human foot or arm. The cubit was the forearm, *i.e.* from the elbow joint to the tip of the long finger. The cubit was subdivided into two spans, or six hand-breadths (palms), or 24 finger-breadths (digits). The Jewish rod was 6 cubits. Several values have been assigned to the Jewish cubit, varying from 20 to 21 English inches. The Greeks and Romans measured by the foot (pes), the hand (palma), the palm (παλαιστη), and the finger (digitus), which mode passed down to the Romano-Germanic races. The Romans also had the pace, a military measure, and they and the Greeks had the cubit (cubitus), from the point of the elbow to the point of the middle finger, and the ulna; and a fathom, tesa, toise, is the outstretched arms across the body. Similarly in the E. Indies, the finger, the hand, the forearm, and the outstretched arms, also the foot, the pace, and the distance to which human voice can be heard, have suggested the linear measures in use.

A variety of nominal measures, and of values given to the same measure, exist in different parts of India, and even in the same district. Even in a single village a certain nominal measure will have half a dozen different values, according to which of as many different articles on the floor

of the vendor in the bazar is about to be sold. It is a very general custom that there should be two series of weights employed in each shop, according to the transaction. When the shopkeeper sells, he uses a maund of 24 lbs., but when he buys, this weight makes way for another of the same name of 28 lbs. In Azimgarh, for example, cotton and spice are measured by the seer of 80 tolas, ghi and salt by the seer of 95 tolas, while 96 tolas forms the rate for corn, sugar, and tobacco; the merchants themselves employing for their own purchases seers of 105 and 108 tolas. In Malda the seer has no less than fifteen different values,—50, 58, 60, 72, 75, 70, 80, 80⅝, 91, 92, 94, 96, 100, 101, and 105 tolas. In Dacca the relative values are 60, 70, and 82 tolas. Bhagulpur boasts of six different seers of 64, 67, 80, 88, 101, and 104 tolas respectively. The merchants of Juanpur employ in their own dealings a seer of 112¾ tolas, but retail to the people in seers of 80 and 96 tolas.

Cotton is sold in Madras in candies of 500 lbs., but in many of the cotton districts the candy is but 480 lbs. to the ryot. In Mysore, the same name represents 560 lbs., while in Pondicherry it sinks to 517 lbs., omitting fractions, and rises in the purchases of the merchants to 562 lbs.; while, as if further to complicate this measure, brass, copper, and zinc are valued according to candies of 450 lbs. In Kandesh, sesamum seed is sold by the candy of 560 lbs., mustard seed in Gujerat is measured by the candy of 612 lbs., while 580 lbs. is the value for mustard seed in Sholapur; and the territory of Goa measures its kokum by the candy of 784 lbs. The coffee grown in Mysore is estimated in maunds of 28 lbs. If bought by a Madras merchant, it is priced in maunds of 25 lbs., and transmitted to him by railway in maunds of 82 lbs.; but if bought for export from Calicut, it must be in maunds of 30 lbs. each.

The ordinary Madras maund is 25 lbs.; in Bengal it is 82 lbs.; while in Bombay it is 28 lbs. In some parts of the western coast of the Madras Presidency 30 lbs. is the value of the same nominal standard, while the indigo and other factory agents of Bengal reckon by a maund of nearly 75 lbs. In Bombay the bazar maund may contain 40 or 42 seers, while the candy may contain either 20, 21, or 22 maunds, and varies in weight from 500 to 560, 588, or even 616 lbs. In Surat and its neighbourhood, the maund may contain either 40, 41, 42, 43¼, or 44 seers, according to the article sold, or whether the transaction be wholesale or retail; and further, these seers themselves differ so much in value, that while the maund of 40 seers weighs 31 lbs. avoirdupois, that of 41 seers weighs 38 lbs.; that of 42 seers only 39 lbs.; that of 43¼ seers weighs 44 lbs.; and that of 44 seers only 41 lbs.! In Travancore the maund is 32 lbs. In Cuttack salt is sold in maunds of 100 lbs.; the duty is paid in the Panjab on maunds of 80 lbs., and in Calcutta of 82 lbs.

The original unit of weight in Southern India seems to have been the gold coin called by the English a pagoda. It is now uncurrent, but was about 52½ grains weight. 80 pagodas weight is, according to the native tables, a seer (cutcha) of 24 rupees weight. This corresponded with the average weight of the old native rupee of 175 grains; but since the introduction of the Company's rupee of 180 grains, the pagoda weight is 54 grains generally. The same confusion formerly existed in Bengal between a Sicca weight of 179⅝ grains and a Sicca rupee of 192 grains. There are also seers both in Madras and Bombay of 84 rupees weight. A greater degree of confusion could not possibly exist, nor greater hindrances to internal trade and prosperity.

The question of the weights and measures has been before the several Governments of India ever since the early years of the 19th century. In a letter to the Madras Government from the Court of Directors of the E.I. Company, dated 6th July 1829, the Court forwarded standard weights and measures in accordance with Act v., George IV. cap. 74; and subsequently the Directors, in their despatch of 17th July 1833, expected the general adoption in India of the imperial measures. The Government of India, in Act vii. of 1833, furnished certain ponderary tables, but these did not make any allusion to measures of capacity, although by far the greater portion of the domestic transactions in India are in grain. The Calcutta Chamber of Commerce, on the 19th of May 1836, resolved to adopt the weights of the Government, but urged the introduction of the imperial gallon for liquids, and proposed that new measures of capacity for grain should be regulated by the weights; but they did not, however, show how this was to be done, and the Government declined to act on the recommendation of the Chamber.

The table of weights adopted by the Government of India for the use of their own offices, was in accordance with native usage in Bengal, and was approved of by the Chambers of Commerce in Calcutta and Bombay. It is as follows:—

1 tola	=	180 grains.
5 tolas	=	1 chittak.
16 chittaks	=	1 seer = 80 tolas = 2·075143 lbs. avoir.
40 seers	=	1 mun (or maund) = 82⁶⁄₇ lbs. exactly.

By a proclamation of the Governor of Madras in Council, October 16, 1846, after the 1st of January 1847, the undermentioned weights, showing the equivalents in avoirdupois and troy weights, could be used in the revenue, commissariat, and other public departments throughout the Madras Presidency:—

Madras Weights.	Avoirdupois.			Troy.		
	lbs.	oz.	drs.	lbs.	oz.	dwts.
180 grains = 1 tola .	0	0	6·582⁶⁄₇	0	0	7½
3 tolas = 1 pollam	0	1	3·748⁴⁄₇	0	1	2½
40 pollams = 1 viss .	3	1	5·942⁶⁄₇	3	9	0
8 viss = 1 maund	24	10	15·542⁶⁄₇	30	0	0

Thus—

40 pollams = 1 viss = 120 tolas = 3·0857 lbs. avoir.
8 viss = maund = 960 tolas = 24·6857 ,, ,,

This table was sanctioned for Madras by the Government of India, but was entirely different, with the exception of the tola unit, from the weights adopted for Calcutta.

The Madras Government in this notification promulgated also a table of measures to be used in Government transactions as follows:—

1 ollock =		12½ cubic inches.
8 ollocks = 1 measure (puddee)	= 100	,,
8 measures = 1 marcal	= 800	,,

But these measures were not adopted by the people; and even in the town of Madras the Government had to authorize the stamping with

the Government seal, the customary measure or puddee of 104¼ cubic inches, which had been the real standard since 1802.

The *linear measure* unit of India is generally the distance from the elbow to the tip of the middle finger of a tall man. This length is known as the Hat'h, HIND., Mulum, TAM., Mora, TEL., and averages 19½ inches. It is always translated cubit, though invariably exceeding the English cubit of 18 inches by 1½ or 2 inches. In the Southern Carnatic, the adi or length of a tall man's foot is in use, and averages 10¼ inches.

Guz.—Akbar, after very considerable inquiry, introduced as the only legal measure, what is called the Ilahi guz. The Ayin Akbari informs us that this was taken as the mean of three chief guz then existing, the smallest about 28 inches, and the Ilahi guz between 33 and 34 inches. Mr. Duncan, after prolonged inquiry, estimated it at 33·6 inches, while others have valued it from 33 to 34·25 inches; a mean of these is 33·75 inches. Jervis thinks it was exactly 33·5 inches. Jonathan Duncan employed, when engaged in 'settling' the N.W. Provinces, a guz of 33½ inches. In the coast districts of the west, the most common guz is that of about 28 inches. In other parts there is a group whose average is about 39 inches. Frequently two or more of these are present in one locality for different transactions. Merchants will buy by the guz of 34 inches, and sell by that of 30; or silk will be measured by one, cloth (cotton or woollen) by another, while carpenters and bricklayers will use each a distinct measure. For instance, cotton cloth in Surat is measured by the guz of 27·8 inches, silk and other valuable stuffs by the guz of 34·7 inches, while the carpenter employs a guz of 27·2 inches. At Juanpur, the carpenter values his guz at 30 inches, the tailor estimates his at 34 inches, while the cloth seller employs one of 40 inches. The muslin seller at Farrakhabad uses a guz of 33¾ inches, the cloth seller one of 34 inches, while the seller of silk for turbands and full-dress coats uses no other than 38¼ inches. Similar cases might be adduced in infinite abundance. Wherever the cubit varies, the guz follows, usually in the proportion of 12 to 7, though this is by no means an invariable rule.

The guz in the Madras Presidency is from 26 to 39 inches. It is, however, very much superseded by the English yard measure. In the districts of Madura and Tinnevelly, the tutcha-kole or artificer's stick is 33 English inches.

In the south of India the guz is subdivided into 24 ungulum, each of which, taking the Tanjore guz of 33½ inches, is $1\frac{4}{10}$ of an English inch. The term ungulum in Tamil signifies the thumb, and in the above measure it is the distance from the thumb joint to the tip of the nail. This ungulum is considered equal to 2 virrul kuddei, or finger-tip breadths.

The term *ungulum* is, however, sometimes used to mean a thumb-breadth, and is then the same as the virrul kuddei or finger-breadth or digit, or the 24th part of a cubit (about ·82 inch), according to the following table:—

4 finger-breadths	= 1 palm.
12 finger-breadths	= 1 span.
24 finger-breadths	= 1 cubit.
4 cubits	= 1 fathom.

The *tutcha-mulum* or artificer's cubit (double) of Trichinopoly is 33 inches, or the same as the Tinnevelly tutcha-kole, and is subdivided into 24 ungulum.

The *bam*, translated *fathom*, in Salem and Coimbatore averages 6 feet 4½ inches, and in Guntur 6 feet $6\frac{8}{10}$ inches. It is generally, but not always, subdivided into 4 cubits. The bam or fathom is also used by native seamen on the lead line.

For distances of greater length, there is no defined measure in Southern India. A *nali-vulli* in Tamil is dervied from Vulli, a road or way, and Nali, a period of time, which is the 60th part of the 24 hours, or 24 English minutes, generally known as an 'Indian hour.' The distance that is usually walked in this time is called a nali-vulli, and is about 1½ English miles or somewhat less. Seven nali-vulli make a *kadum* of about 10 miles.

The *cos* is generally considered 2 English miles, but, according to Colebroke, as follows:—

4 cubits = 1 danda or staff.
2000 danda = 1 cos.

Taking the cubit at 19½ inches, the cos would be 2·46 miles.

Hat'h, in the linear systems of India, is the cubit or human forearm; and in oriental countries, as well as in the west, this unit is divided into two spans and 24 finger-breadths. Under the Hindu princes, the hat'h (in Sanskrit, hasta) was equal to two vitcsti or spans, and to 24 angul (angula). The angul, finger, is divided into 8 jau (Sanskrit, yava) or barley-corns. 4 hat'h or cubits = 1 danda or staff; 2000 danda make 1 krosa or cos, which by this estimation should be 4000 yards English, or 2¼ miles. The Lilavati states that 10 hat'h make one bans or bamboo, and 20 bans in length and breadth = 1 niranga of arable land. Natives of India, in speaking of the hat'h or cubit, allude to the natural human measure of 18 inches, more or less, and it is practically used in measuring off cloths, ribbons, etc., and in taking the draught of water of a boat. In many places, also, in Bengal and in Southern India, the English cubit has been adopted as of the same value as the native measure.

In Burma, the people seemingly use a lineal measure of this name, consisting of the natural cubit plus a hand-breadth, which would be about 20 inches. The popular cubit in Birbhum is 15¾ inches in length; the Revenue Survey employed a cubit of 18⅓ inches. In the Hoogly district, the cubit varies from 18 to 19¾ inches; at Sarum, 24 inches; while in Broach, Kaira, and Vijydrug it is respectively 19·2, 19·4, and 19·58 inches.

Jureeb, PERS., is a measuring chain or rope. Before Akbar's time it was a rope, but he directed it should be made of bamboo with iron joints, as the rope was subject to the influence of the weather. European surveyors use a chain. A jureeb contains 60 guz or 20 gant'ha, and, in the standard measurement of the upper provinces of India, is equal to 5 chains of 11 yards, each chain being equal to 4 gant'ha. A square of one jureeb is a bigha. Till the new system of survey was established, it was usual to measure lands paying revenue to Government with only 18 knots of the jureeb, which was effected by bringing two knots over the shoulder of the measurer to his waist. Rent-free land was

measured with the entire jureeb of 20 knots. A jureeb in Hebrew and Arabic signified originally only a measure of capacity, equal to 4 qufeez, or 384 mud (Latin, modius), and in course of time came to signify the portion of land which required as much to sow it as a jureeb would contain. The pat'ha and nalee of Garhwal and Kamaon have a similar origin.

At the cession of the Carnatic, besides the Chittur pollams in N. Arcot, there were the two large zamindaries of Calastry and Cavetnaggur, the latter also known as Bom Rauze's country. Throughout the latter country (Bom Rauze's) the foot of the village god of Nanaveram was always taken as the unit of land,

Measurement of which 64	= 1 gant'ha.
100 gant'ha in Pungi 12 or 15 in Nungi	= 1 cawni.

Bigha.—For square measures, the bigha is the most widely-spread standard. It is based upon the guz or cubit, and therefore differs in at least an equal proportion; the name being applied to any decently large area varying from an acre to 1500 square yards.

In Calcutta, the value is said to be 1600 square yards, while according to a very careful calculation made by Mr. Holwell, and quoted by Major Jervis, the real content should be 1778 square yards, more than ten per cent. greater than is commonly believed.

In Orissa, to the south of Calcutta, the bigha is 4840 square yards; while in Behar, to the west, it is only 3025 square yards. In Tirhut, it may contain amongst other values, any one of the following quantities,—3025, 3567, 3600, 4225, 4549, and 4900 square yards! Such a measure can only be of use to confuse. At Saharunpur, the bigha contains in one village 824½ square yards; in another, 2317·4 square yards; in a third, 2456·2 square yards; while in a fourth it contains 2756 square yards. In Nuddea, it may contain either 6400 or 3025 square cubits. The Bogra bigha is 1406¼ square yards, while that of Dehli is 3025, and that at Ghazipur contains 2755¼ square yards. At Shahjahanpur it may either be 2916 or 3600 square yards, while at Hoshangabad it is $4865\frac{1}{18}$, and at Benares 3136 square yards. On the western side of India, the variations are equally numerous. At Broach, the bigha contains 2477; at Surat, 2844; in other parts of Gujerat, 2994; while in the east it contains no less than 4013 square yards.

In Southern India, it appears to have been the custom in ancient times to name an area of land after the quantity of grain that it was thought would sow it, or the quantity it was thought it would produce. Thus, for instance, a candy of land was as much as would produce a candy of grain, and this was by estimate, and not by actual measurement; or if a measured area was considered a candy in one village, it would not be so in the next. Even where there is some defined superficial measure, commencing from a rod square, the number of cubits to the rod varies, though the term by which the square rod is known is the same.

Cawnie.—In some districts of the Madras Presidency the land measure is well defined, as in the case of the cawnie and the acre. The former no doubt formerly differed in different places, but its dimensions seem to have been determined and introduced by Royaji, the celebrated dewan of Muhammad Ali (Wallajah), nawab of the Carnatic. Wherever the cawnie exists, it is now 57,600 square feet, or 1·322314 acres, except in some of the taluks of Trichinopoly. The English *acre* was introduced by Sir T. Munro into Bellary and Cuddapah during the survey of 1802–1806, and, 1842, it was introduced on a similar occasion into Kurnool. In both cases the chain of 33 feet was used instead of Gunter's chain of 66 feet, so that the square chain was $\frac{1}{40}$th acre, thus introducing an awkward sub-multiple.

The term goonta or coonta is synonymous with culi and guli. The word seems to denote the land measure next below the maximum of the place; thus the pooty of Rajamundry, the cutty of Masulipatam, the coatchel of Guntur, the goontoo of Nellore, the cawnie of Chingleput, the acre of Bellary, and the mow of Tanjore, are all subdivided into goonta (coonta) or culi (guli). The goontoo, etc., of one district, is not at all necessarily the same as the goontoo, etc., of another.

Mani.—In Madras, Sir Thomas Munro established a measure (called a ground or mani) of 60 × 40, or 2400 square feet, of which 24 make a kani = 57,600 square feet = 6400 square yards, or exactly equal to four Bengal bighas.

The *Madras kani* is to the English acre as 1 to 1·3223, or as 121 to 160 nearly.

Adi.—In Chingleput, the adi or Malabar foot is used, which is 10·46 inches; 24 adi = 1 kali, and 100 square kali = 1 kani, or nearly an English acre. The common kani, however, is 26 adis, or 22⅔ feet, which makes the kani = 1 acre 28¾ perches.

Biswa, from Bis, HIND., twenty, is the twentieth part of a bigha, and besides being a measure of land, is also used to signify the extent of proprietary right in an estate. Each estate or village is considered an integer of the bigha, which is divided into imaginary biswa and biswansi, to show the right of any particular party. Thus the holder of 5 biswa is a holder to the extent of one-fourth of the entire village, precisely in the same way as the As was used amongst the Romans. Thus hæres ex summuncia, heir to one twenty-fourth; hæres ex dodrante, heir to three-fourths; hæres ex asse, sole proprietor. In the same manner, bes, bessis was used to express a biswa; berar,—socius ex besse; and thus in sound and meaning, for of course there is no real connection, there is a close resemblance between the words. Bes, when it was thus applied as a subdivision of the As, was the eighth part of a jugerum or acre; not, as is usually applied, two-thirds.

Cos, HIND., is the itinerary measure of India. The Ayin-i-Akbari lays down distinctly that the cos consists of 100 cords (tunab), each cord of 50 guz; also of 400 poles (ban), each of 12½ guz: either of which will give to the cos the length of 5000 guz. The length of the cos, as ascertained from the average distances of the old cos minar or cos pillars, is = 2 miles 4 furlongs 158 yards. In different parts of India, however, these vary, and in India the cos varies from about 1 mile to 3 miles.

The *Gujerati cos* is the greatest distance at which the ordinary lowing of a cow can be heard, which is determined to be 50 jureeb, or 15,000

guz. This cos resembles the Chinese lih, *i.e.* the distance which can be attained by a man's voice, exerted on a plain surface, and in calm weather. Another, in Bengal, is estimated by plucking a green leaf, and walking with it till it dry. Another is measured by a hundred steps, made by a woman carrying a jar of water on her head and a child in her arms. All these are very indefinite standards.

Meel or mile, league. — The same may be remarked of the oriental meel, as well as the European mile and league. The two former evidently derive their name from the Roman milliare, and the difference of the value proves that the mere name was borrowed without reference to its etymological signification. According to the Kamus, the oriental meel is a lax and vague measure, but it has been considered by Dr. Lee to be to the English one as 139 to 112. The league also, from the German Lugen, to see, and signifying the distance that can be readily seen by the eye on a plain surface, is as indefinite as a Gujerat gao and a Bengal or Dhuppea cos. Cos is an Indian word; the equivalent in Persian is kuroh, the same as the Sanskrit word krosa, of which four go to the yojan, about the precise value of which different opinions are held,—4 English miles according to Bopp; 4½, 5, and 9 miles according to Professor Wilson; but, according to the distances in Fa Hian's route, the yojan in his time was equal to 7 English miles, and this agrees much better with what we find the yojan to be when we resolve it into its component parts,—

8 barley-corns = 1 finger.
24 ,, = 1 dund.
1000 ,, = 1 krosa.
4 ,, = 1 yojan.

And, estimating the finger-breadth at eight barley-corns, this makes the yojan equal to 6 miles 106 yards and 2 feet.

Dry and Liquid Measures.—India does not, properly speaking, possess dry or liquid measures. When these are employed, they depend upon, and in fact represent, the seer or man weight, and the value of a vessel of capacity rests solely on the weight contained in it. The mode in which this is effected for the dry measures of the south and west of India, is by taking an equal mixture of the principal grains, and forming a vessel to hold a given weight thereof, so as to obtain an average measure; sometimes salt is included amongst the ingredients. The maund and seer measures of capacity are supposed to represent the equivalents of a maund and seer weight, although it is evident, since no two articles have exactly the same proportionate bulk, that no two measures need correspond. In the absence of suitable standards of capacity, almost every article is sold by weight, even ghi, oil, and milk. Grain is sold either by weight or measure, but with an understood proportion between them; thus in Madras the measure for paddy is exactly the bulk of a viss weight. There are, however, a few measures of a well-ascertained value, which appear to have been arranged in something like order around the cubic cubit. An old writer on arithmetic, Bhaskaracharya, states explicitly that a measure called karika was the cubic cubit, or ghunuhústu. Above this was the cube of a double cubit, and ten times the half of this is the garce, a measure well known through all Southern India, and formerly universal; so that the garce is 40 karika. The half of the karika is the parah. One-tenth part of the cubic cubit is the mercal. In Western India there is the candy of 10 cubic cubits. The cube of one-fourth of a cubic cubit is the pyli. In Southern India there is the tūmi of four hundredths of the garce, and the paddacu or one-fifth of the cubic cubit; while in the Telugu districts there is the pūti of two cubic cubits, and another tūmi one-tenth of one cubit. Turning northwards to Ganjam we find the burnum of two cubic cubits, and the nawty of one-tenth of a cubic cubit, and the tūm of one-fortieth of the same measure.

On the other side of India, in Bombay, there is the khundi, exactly corresponding with the garce. The cube of half the side of the garce, or the half of the cubic cubit, is the parah of the same value as in Southern India, while the cube of one-fourth the side of the parah is the seer. In Malwan, the khundi is greatly altered in value, and becomes ten cubic cubits, proving that there is an understood connection between the cubit and measures of capacity. In the same district is the parah of half the cubic cubit. As an official recognition of the relation between measures of capacity and the cubit, it may be mentioned that when the Government of Bombay ordered that the measures for salt throughout the Konkan should be rendered uniform, it was resolved to employ a parah of exactly half a cubic cubit, estimated at 19·5 inches. Reducing the measures referred to into a table, we find the following in cubic cubits:—

Madras garce, . . .	40	Mercal, ...	$\frac{1}{10}$
Malwan khundi, . .	10	Tumi, ...	$\frac{1}{40}$
Puti or burnum, . .	2	Nawty, ...	$\frac{1}{20}$
Ghunuhustu, . . .	1	Tum, ...	$\frac{1}{400}$

We see here two kinds of division besides the ordinary one of halves and fourths.

10 mercals = 1 cubic cubit.
10 ,, = 1 khundi.
Cube of ¼ side of cubic cubit = pyli.
,, ,, ,, parah = seer.

If we compare the lengths assigned to the cubit in different parts of India, omitting one or two of the smallest and plainly diminished cubits, we shall find the average to be from 19·5 to 19·7 inches.

Trichinopoly is the only place where grain is said never to be sold by weight. The marcal (properly marakkal, from the Tamil) and parah are the commonest measures; the latter is known throughout India. In Calcutta it is called ferrah, and is used in measuring lime, etc., which is still recorded, however, in the man weight. In its weights, Southern India retained, from the ancient metrology of the Hindus, most of the names and terms properly Hindu, پل pala; تولا tula; ویسا visa; بهارا bhara; کهاري khari; کهاندي (khandi); بابا baha. Throughout the Moghul empire, on the contrary, the seer and man were predominant. The word man, of Arabic or Hebrew origin, is used throughout Persia and Northern India, but it represents very different values in different places. Thus the man of Tabreez is only 6¼ lbs. avoir., while that of Palloda in Ahmadnaggur is 163¼ lbs.

The following is the scale of measures in use at Madras:—

				Cub. in.	
	1 olluk	=	11·719		
8 olluk	= 1 padi	=	93·752		
8 padi	= 1 marcal	=	0·750	= 27 lbs. 2 oz.	
5 marcal	= 1 parah	=	3·750	= 2 dr. water.	
400 parah	= 1 garce	=	300·000		

The Madras Revenue Board, on the 19th May 1883, furnished the revenue collectors with a statement, showing equivalents in Government seers of 80 tolas of local measures of different food-grains and of salt. The grains tested were four kinds of unhusked and husked rice, Oryza sativa; the horse-gram, Dolichos uniflorus; the jowari or cholum, Sorghum vulgare; the bajri or cumboo, Penicillaria spicata; the varagoo, Panicum miliaceum; the ragi, Eleusine coracana; the ulundu, Phaseolus mungo; and wheat, Triticum æstivum.

Tum.—In the Ganjam district, the assumed normal contents of the tūm, in rice, ranged from 80 to 280 tolas, with measures of cubic capacity 64·88 to 231·82 inches.

Seven *seer* measures, in use in the Madras Presidency, some of them struck, some liberally or moderately heaped, the assumed normal contents ranged from 75 to 130 tolas, viz. 75, 78, 80, 86, 90, 92, 130.

The *tavva* of four taluks of Vizagapatam is 33 tolas.

The Bezwara *mercal*, liberally heaped, 260 tolas.

The *adda* of Gudivada in the Kistna district, 210 tolas.

The *manika* and padi manika measure is in use in the Nellore and Kistna district, and liberally heaped contains from 106 to 200 tolas.

The *measure* in use in Bellary, Kurnool, Cuddapah, Madras town, and Chingleput is of 75, 80, 114, 120, 128, 130, 132, 135, 144, 150, and 160 tolas; and there is a half measure of 75 at Madarpak, and one of 64 at the Neilgherries.

The *padi* is in use in the Tamil districts, where there are seven quantities of 75, 86, 116, 133, 140, 144, and 150 tolas; and from half padi of 65, 66·5, 70, and 72 tolas.

The *nali* of Cochin is of 43 tolas.

A *garce* is assumed to contain 3200 measures, the weight of a measure of each of the following grains being—rice, unhusked, 80 tolas; do. husked, 120; Sorghum vulgare, wheat, and Eleusine coracana, each 111; Penicillaria spicata and Panicum miliaceum, each 102; Phaseolus mungo, 115; Dolichus uniflorus and salt, each 120.

The *mercal* of the Madras grain market is equal to eight Madras struck measures of 120 tolas each.

Seer.—The most common grain measure, and one which is to some extent known in almost every part of India, is the seer measure; this is always understood to be a measure which, when heaped, will contain a seer weight of rice, or in some places, instead of rice, a mixture of the nine most common grains, known as the nou-daniam measurement. The nine grains used in the Madras Presidency are rice, chenna, culti, pessalu, minamalu, dholl, anamalu, gingelly oil-seed, and wheat. As only heaped measure is recognised by native usage, it is evident that there is no rule as to the cubic contents of the measures used; for vessels of very different cubic contents may contain the same when heaped, in consequence of having different diameters. It is on this account that the values given to Indian measures, in such tables as those of Major Jervis, or Dr. Kelly in his Cambist, being founded on the gauged cubic contents, do not represent the true quantities.

By Act xi. of 1870, the Government of India established the metric system as the standard for India. But the Secretary of State disallowed the provisions of Act xi. relating to measures of length, and another Act, xxxi. of 1871, was substituted. For weights, a seer was decreed to be the unit of weight; and for measures of capacity, measure containing one such seer of water, at its maximum density, weighed in a vacuum. The smaller and the larger quantities have not as yet (1884) been formulated; and the Bombay Government, writing on the 13th July 1878, stated 'that the standard weights and measures in the divisions of the Presidency and in the town of Bombay vary locally,' and no standard has ever been declared of general application, and having them tested is a matter of custom rather than of law, as the Government of India has not framed or issued rules under Act xxxi. of 1871.

The following measures of weight, capacity, and length are in use in the south and east of Asia:—

1 Indian imperial seer = avoir. 2·204,621,25 lbs. = 15,432·348,75 grains = 35·735,270,833 tolas. Avoir. 2 lbs. 3 oz. 4·383,04 drs. = 1 French kilogramme.

Avoir. 16 drs. = 1 oz.; 16 oz. = 1 pound (lb.); 14 lbs. = 1 st.; 28 lbs. = 1 qr.; 4 qrs. = 1 cwt.; 20 cwt. = 1 ton.

1 chittak = 5 tolas; 16 chittak = 1 seer; 40 seers = 1 maund; 1 maund = 37·324,195,385,3 imperial seers.

1 maund = troy, 100 lbs. = avoir. 82⅔ lbs.; 245 maunds = 9 tons.

1 Indian imperial seer = 32·150,726,562,5 troy oz. = apothecaries', 2·679,227,213,541,66 lbs.

10 rutti = 1 masha; 10 masha = 1 tola; 1 tola = troy, 180 grains.

1 imperial seer = 3·527,394 Madras seers = 3·149,458,927 Bombay seers.

10 imperial seers = 0·881,848,5 Madras maunds = 0·787,364,732 Bombay seer.

Madras weights—10 pagodas = 1 pollam; 8 pollam = 1 seer; 40 seer or 8 vis = 1 maund; 20 maund = 1 candy.

Bombay weights—9 tanka = 1 nowtuck; 8 nowtuck = 1 seer; 40 seer = 1 maund; 20 maunds = 1 candy.

Burmese weights—1 tikal = troy, 252 grains = 0·016,329,335 Indian imperial seer. 100 tikal = 1 vis = 140 tola = avoir. 3·60 lbs. = 1·632,933,548,1 Indian imperial seer.

1 Indian imperial metre = 39 British inches.

Ceylon.—Native Dry Measure.

4	cut chundoos	= 1 cut measure or seer.
19½	,,	= 1 coornie.
4½	cut measure	= 1 coornie.
2½	coornie	= 1 marcal.
2	marcal	= 1 parah.
8	parah	= 1 ammunam.
9½	ammunam	= 1 last.

Burma.—Major Burney, when Resident at Ava, mentioned vis, tikal, and moo as the general terms used in Burma in the transactions of commerce and accounts. Their subdivisions and multiples are,—

1 pe or be.
2 = 1 moo.
2½ = 1 mat.
5 = 2 = 1 hkwe.
10 = 4 = 2 = 1 kyat or tikal.
1000 = 400 = 200 = 100 = 1 peiktha or vissom.
100 tikal are precisely equal to 140 tolas.

Singapore.—Commercial Weight.

16 tahil	= 1 catty	= avoir.	1⅓	lbs.
100 catty	= 1 pikul	= ,,	133⅓	,,
3 pikul	= 1 bhara	= ,,	400	,,
40 pikul	= 1 koyan	= ,,	5333⅓	,,

Straits Settlements.—Measures of Capacity.

4 pau = 1 chupah; 4 chupah = 1 gantang; 10 gantang = 1 parah.

16 gantang = 1 nalih; 10 nalih = 1 kencha; 5 kencha = 1 koyan.

800 gantang = 1 koyan; 20 gantang of rice = 1 bag.

Straits Settlements.—Long Measure.

4 plempap	= 1 jengkal	= 9	inches.
2 jengkal	= 1 hasta	= 18	,,
4 hasta	= 1 depa	= 72	,,
2 depa	= 1 jemba	= 144	,,
20 jemba	= 1 orlong	= 2880	,,

Opium Weight.

10 tee = 1 hoon; 10 hoon = 1 chee; 10 chee = 1 tahil.

Thuoc is the generic name for the measure of length in Cochin-China. Those more commonly employed vary from 0·405 to 0·649,68 metres, or from 15·945,255 to 25·578,551,28 English inches.

Siamese.—Long Measure.

1 niw	= 13/16 English inch.		
12 niw	= 1 kup	= 9¾	English inches.
2 kup	= 1 sawk	= 19½	English inches.
4 sawk	= 1 wah	= 78	English inches.
20 wah	= 1 sen	= 130	feet.
400 sen	= 1 yot	= 9⅞	statute miles.

Siamese.—Dry Measure.

1 tanan = 1⅓ pint; 20 tanan = 1 tang.

25 tanan = 1 sat; 100 tang = 80 sat = 1 keean or koyan.

Chinese Weights.

58⅓ grains = 1 mace.
10 mace or 582 grains = 1 liang.
16 liang or 9330⅓ grains or 1⅓ lbs. = 1 catty.
1 tael = avoir. 1⅓ oz.
16 taels = 1 catty = avoir. 2⅔ lbs.
100 catties = 1 pikul = avoir. 133⅓ lbs.
1 catty = avoir. 1⅓ lbs.
1 pikul = 100 catties = 133⅓ English lbs.
1 catty = 16 tael.
1 tael = 1⅓ English oz.
16·80 pikul = 1 ton.
1 li or cash = avoir. ·0013 oz.; 10 li = 1 fan or kandarin = avoir. ·0133 oz.
10 fan = 1 tsin or mace = avoir. ·1333 oz.
10 tsin = 1 leung or tael = avoir. 1⅓ oz.
16 leung = 1 kan or catty = avoir. 1⅓ lb.
100 kan = 1 tam or pikul = avoir. 133⅓ lbs.
120 kan = 1 shek or stone = avoir. 160 lbs.

Chinese Measures.

10 fan = 1 tsun or inch = 1·41 English inch.
10 tsun = 1 chek or foot = 14·1 English inch = 1·175 English feet.
10 chek = 1 ch'eung or fathom = 11 feet 9 inches English.

The treaty of Tien-tsin fixes the ch'eung at 141 English inches; 1 li or mile = ⅓ English mile; 10 li or 1 po or league = about 3 English miles; 1 mau land measure = 2/13 of an English acre.

China money.—From 1874 to 1882 the tael ranged in value from 5s. 0½d. in 1878 to 5s. 9½d. in 1880.

Hong-Kong.—Measure of Length.

1 ch'eung	= 141 English inches.
1 covid or chek	= 14 1/10 English inches.
1 tsun	= 1⅓ English inches.
10 fan	= 1 tsun.
10 lip	= 1 fan.

Archipelago.—The weights and measures of the Malays, with their denominations, have not only extended over the whole Malay Archipelago, but are also prevalent in the Philippines. The original measures of the Malays and Javanese were evidently by capacity (takar), and not by weight, for which there are no words in their language except such as signify heaviness or balance. The lowest denomination for a measure of capacity among the Malays goes under the name of chupak, most probably taken from the shell of the cocoanut or the joint of the bamboo. Of this, 4 make a gantang, and 800 of the last a koyan. The measures of length are taken from the members or parts of the human body, as finger-length, span, foot, pace, fathom, with the length from the foot of one side to the tip of the outstretched hand on the opposite one. Javanese, in reference to their irrigated land, have for the largest measure a jong, which literally signifies a ship, and this divided into halves called kikil, or a leg, and into fourths called ban, which means a shoulder. Another admeasurement of land goes under the name of the chacha, of which gawe-ning-wong is the synonym, the first word signifying count or census, and the last a man's work, that is, the quantity of irrigated land that a family of peasantry can till. This last term is of the same nature as the English plough of land. The Chinese have introduced their own well-defined weights, although under native names. Thus we have the tael or weight of 23 drams avoirdupois, the catty consisting of 16 tael, and the pikul, which literally signifies a man's load or burden, composed of 100 catties, or 183⅓ lbs. avoirdupois.

10 cash	= 1 kandarin.	16 tael	= 1 catty.
10 kandarin	= 1 mace.	100 catties	= 1 pikul.
10 mace	= 1 tael.		

Labuan.—Commercial Weights.

10 kandarin = 1 mace; 10 mace = 1 tael; 16 tael = 1 catty.

100 catties = 1 pikul; 40 pikul = 1 koyan.

—*Bayley's Madras Land Measures*, 1856; *Bayley's Suggestions*, 1858; *Bridgnell's Ind. Imp. Tables*, 1871; *Crawfurd's Dict.* p. 446; *Prinsep's Tables*, pp. 61, 62; *Kelly's Cambist; Jervis' Metrology; Mr. W. H. Bayley in* No. 4 *New Series of Madras Journal of Science for* July to September 1857; *Do. do. on the Land Measures of the Madras Presidency; Gover, W. and M.*, 1865; *India Governments' Records; Jervis, W. and M.*, 1826; *Müller, Ind. Tabs.*, 1836, *Statistical Abstract, Weights and Measures; Woolhouse, W. and M.*, 1858.

WEIR, JOHN, a skilled gardener who was employed under Mr. C. R. Markham to collect cinchona plants in the Caravaya forests of S. America. He conveyed his plants to India in 1860.—*Markham, Per. Bark.*

WEI-YUEN, the chief compiler and composer of the Hae-kwoh-too-che, the Chinese work usually known as Lin's Geography. It is a work of 25 volumes, and in a few years went through five editions. Wei-Yuen did not long survive his more celebrated collaborateur, Lin-tseh-seu. Both were sincere enemies of Great Britain and the British, and carried out their enmity in acts and in their writings.—*Dr. Edkins.*

WELDI, a tributary tribe of Bedouins on the right bank of the Euphrates.

WELL.

Baori, Baoli,	HIND.	Chab,	PERS.
Bao,	MAHR.		

Drawing water has ordinarily been the employ-

ment of females throughout the east from a remote antiquity. Some of the wells in India are constructed with much architectural embellishment, of great depth, and of considerable breadth. The more ancient are of a square form, those of recent date are frequently round. They are surrounded for their whole depth with galleries in the rich and massy style of Hindu works, and have often a broad flight of steps which commences at some distance from the well, and passes under part of the galleries down to the water. The deep wells have the descent from the brink by long flights of steps leading far down below the surface of the ground, relieved by landing-places and covered chambers, in which travellers may rest and take refreshment during the heat of the day.

In the alluvial lands of India, and in the beds of rivers, wells are frequently sunk by means of earthenware or iron rings, which are placed one over the other, and the inside earth or sand being scooped out, the rings sink down. These are called pot-wells, and in Bangalore cost about five rupees for a well eighteen feet deep. In Madras town a pot-well can be sunk at the rate of a rupee a foot.

Near Futtehpur, in sinking a well, the people build a hollow masonry tower, of the diameter required, and 20 or 30 feet high from the surface of the ground. This is allowed to stand a year or more till it become firm and compact; then they gradually undermine and promote its sinking into the sandy soil. When it has sunk to a level with the surface, they raise the wall higher, and go on throwing out the sand and raising the wall till they obtain water. Some of the wells of India are of several hundred yards in depth. In the Rajputana desert, water is only come to at depths up to 700 feet. But in the granitic tracts of India, the depth of wells ranges from 12 to 40 feet, according to the swell of the ground.

The importance of wells in an arid tropical country cannot be exaggerated, and the fame which is acquired by sinkers of wells has an illustration in John iv. 6, where the well of Jacob, sunk three thousand years before, was still distinguished. Even yet, among the Hindu people, to sink a well, or form a water reservoir or tank, is deemed an act of merit. In the Panjab, pucka wells are usually worked by the harth or Persian wheel. A broad-edged lantern wheel, whose axis lies horizontally over the centre of the well's mouth, carries, on its broad edge, a long belt of mooni rope made like a rope ladder, the ends of which, joined in an endless band, reach below the surface of the water. To this, at every step of the rope ladder, an earthen pot called tind is fixed. As the wheel revolves, the large rope belt descends into the water with its pots, the pots become filled with water, and are drawn up. As they reach the top of the wheel, they are, by the revolution of the wheel, inverted, and their contents poured out into a trough, which is ready to receive them, and which leads to the water-course of the fields to be irrigated. Wells are often sunk in the alluvial soils of India as foundations for architectural structures.

In the Persian method of cooling wells, the well is covered in with beams, mats, and earth, and thatch is built over it to shield the water from the sun. The well, having been filled during the cold weather, may be opened in May, and the water remains as cool to the taste as ordinary ice water throughout the hot season. The water may be purified by being withdrawn into an earthen reservoir adjoining the well, and allowed to flow back. Ali Razza Khan, a Kazzilbash, was the first to introduce these wells into the Panjab. Two may be seen at Lahore, one near the Lohari gate, the other in the Sultan Serai. There are also two in the town of Amritsar, and one at Peshawur. The people crowd to those wells during the hot season as to a fair. The ordinary mode of raising water in India is by the hand, but in the south of the Peninsula of India the pe-cottah is used. It is a lever balanced on a pole, from one end of which falls a bamboo with an iron pot, and a man walks from one end of the lever to another to raise and depress the respective ends.—*Powell, Handbook; Econ. Prod. Panjab*, p. 207; *Heber*, ii. p. 357. See Water.

WELLESLEY. Lord Mornington, afterwards Marquess of Wellesley, was Governor-General of India, 1798 to 30th July 1805. He acted on the view that the British must be the one paramount power, and that native princes could only retain the insignia of sovereignty by surrendering their political independence; and his governing idea was to frustrate the possibility of a French invasion of India. In 1798 he formed an alliance with the Nizam of Hyderabad. In 1799, aided by the Hyderabad contingent, he made war against Tipu, the sultan of Mysore, and Seringapatam was stormed, Tipu falling in the breach. In 1802 he formed an alliance with the peshwa, and with the armies of Sir Arthur Wellesley and General Lake. In 1803 he compelled Sindia and the Bhonsla of Nagpur to cede territory and sue for peace, but the operations against Holkar were unsuccessful. The records of his administration are contained in the Notes relative to the Mahratta War, with Appendix and Plans, 1804; Appendix to Notes on the Mahratta War, Calcutta 1804; Vindication of the Justice and Policy of the late Wars in Hindustan and the Dekhan, London 1806; Despatches, Minutes, and Correspondence during his Administration in India, edited by Montgomery Martin, 1836.

WELLESLEY PROVINCE, in the Malay Peninsula, has remains of Hindu temples, and mounds of shell-fish have been discovered.

WELLINGTON. Arthur Wesley or Wellesley, Field-Marshall the Duke of Wellington, was a distinguished soldier, and an illustration of the importance to a commander of an acquaintance with the civil occupation of a statesman. On the 7th of March 1787 he received his first commission as an ensign in the 73d Regiment of Foot. In May 1794, being then in his 26th year, in command of the 33d Regiment, he embarked at Cork for service on the continent of Europe. In the spring of 1796, the 33d received directions to embark for Bengal. In February 1797, Arthur Wellesley landed at Calcutta. Immediately on his arrival, Colonel Wellesley was despatched upon an expedition directed against Manilla, but by the time that the several vessels had arrived at their first rendezvous the war against Tipu Sultan was determined on, and they were overtaken by a peremptory recall. The 33d was transferred from Bengal and placed upon the Madras Establishment. And on this new scene

of duty Colonel Wellesley arrived in September 1798. The commander-in-chief at Madras was General, afterwards Lord Harris, under whose auspices Colonel Wellesley was stationed at Wallajahbad.

The whole force against Tipu by the end of February 1799 had penetrated into the dominions of Mysore. The first action of importance took place near Malavelly, within thirty miles of Seringapatam. The British commander received Tipu's attack with the right wing of the army, leaving the left, which was composed of the Nizam's contingent under Colonel Wellesley, to charge and turn the flank of the enemy opposed to it. Colonel Wellesley's dispositions for this assault were speedily made, and, having been approved by General Harris, were executed with complete success. He was then placed in command of a field force, with which he advanced to the north of the Peninsula of India, Ahmadnaggur. Pettah was taken by assault on the 11th August 1803, and the fort, long considered the key of the Dekhan, surrendered on the following day. He fought and won the battle of Assaye on the 23d September 1803; Berhampore surrendered 16th October 1803; Argaum on the 28th November 1803; then the Gawilgarh hill fort was taken by his officer, General Stevenson, on the 14th December 1803; and on the 30th December a treaty of peace with Sindia was signed.

Major-General Wellesley was created an extra Knight Companion of the Bath, many addresses were presented to him by various public bodies in India, a splendid gold vase, valued at 1000 guineas, was given to him by the officers of his division of the Indian army, and a sword, worth £1000, was presented to him by the inhabitants of Calcutta. Sir Arthur embarked for England on the 10th of March. On his arrival he was appointed to the command of the troops at Hastings; and on the death of the Marquis Cornwallis, on the 5th of October 1805, to the colonelcy of the 33d. On the 8th of April he was sworn of His Majesty's Privy Council, and on the 10th of April 1806 he married Catherine, third daughter of the second Earl of Longford. In 1807, Sir Arthur accepted in the Portland administration the situation of Chief Secretary for Ireland, under the Duke of Richmond, but in taking office he had stipulated that his ministerial duties should not interfere with his professional; and accordingly, in the summer of 1807, he was once more employed on active service. In the expedition to Denmark he held a post under Lord Cathcart. For his services during this campaign he was publicly thanked in the House of Commons.

The remaining part of his career was on the continent of Europe, and here he won higher honours, and he died 14th September 1852.

WELLINGTON, formerly Jakatala, a hill station and military cantonment in the Neilgherry district, Madras, situated in lat. 11° 22′ N., and long. 76° 50′ E. Jakatala Hill is about 1¼ miles from Coonoor, and 9 miles from Ootacamund, and is 6100 feet above sea-level.

WELLSTED, Lieut. J. R., an officer of the Indian navy, author of Travels in Arabia, and author (London 1838) of Memoirs on the Southern Coast of Arabia; Memoir on the Island of Socotra, in Lond. Geo. Trans. v. p. 129; Vindication of the Accuracy of Bruce, ibid. vii. p. 402; Journey in various directions through Oman, in Bom. Geo. Trans. 1836–1838; Bombay reprint, i. p. 3.—*Dr. Buist.*

WELSH, Colonel JAMES, author of Military Reminiscences, extracted from a Journal of nearly forty years' Active Service in the East Indies.

WELWITSCHIA MIRABILIS. *Hook. fils.* A most extraordinary vegetable production discovered in 1859 by Dr. Welwitsch in tropical S.W. Africa, about half-way between the equator and the Cape. It is a dwarf tree, seldom rising more than a few inches above the ground, with a diameter often of several feet, and a single pair of leaves, which lie flat on the ground, usually torn to ribands, which spring from the margin of the trunk, and persist through the lifetime of the plant, which is estimated to reach 100 years.

WEN-CHANG, the Chinese god of literature.

WENDLANDIA NOTONIANA. *Wall.* W. bicuspidata, *W. and A.* This small tree is common in most of the alpine and sub-alpine jungles of the Madras Presidency, from 2000 to 7000 feet elevation. The timber is strong, and used for various purposes by the natives. Wendlandia cinerea, *D.C.*, is a timber tree of Darjeeling and Terai.—*Beddome, Fl. Sylv.*

WENGER. Dr. Wenger, a Swiss, came to India in 1839 as a missionary of the Baptist Missionary Society. He translated the historical and prophetical books of the Old Testament, and the Gospels and Acts, into Sanskrit, putting the poetical parts of the Old Testament into Sanskrit verse. In Bengali he executed revisions of the translation of the Bible, parts of it he translated afresh, and his version is used by all denominations of Christians in Bengal.

WER. Hind. This Hindi word designates a feud, and in it we have a striking coincidence in terms: wer is a feud, were, a foe. The Saxon term for the composition of a feud is wergeldt. In some of the Rajput states the initial vowel is hard, and pronounced ber. In Rajasthan, ber is more common than wer, but throughout the south-w[illegible] wer only is used. In these we have the origin of the Saxon word war, the Scotch weir, and the French guer or guerre. The Rajput wergeldt is land, or a daughter to wife. It seems to be the word found in many tongues, the Sanskrit vri, the Greek ἄρης, ἥρως, war, wehr, vir or virtus, indicating strength or protection, manly power.—*Tod's Rajasthan*, i. p. 181.

WERN, a wood of Java used for furniture, of a brown colour, of a close substance and light; abundant in some districts.

WESH. Pusitu. Periodical changing of lands.

WESTERGAARD, N. L., professor of Indo-Persic languages in the University of Copenhagen; wrote Account of Caves near Carli, in Bom. As. Trans., 1842, i. p. 248; Letter respecting the Gabr, in Lond. As. Trans. xiii. p. 349; Radices Linguæ Sanskritæ, Bonn 1841; Sanskrit Reading Book, Copenhagen; on the Ancient Persian Cuneiform Inscriptions, Zeit. fur die k. des Morgenlandes, 1845; Decipherment of the Second Achæmenian Arrow-headed Writing, Mem. des Antiquaires du Nord, Copenhagen 1844; Zend-Avesta, with English Translation, Grammar, and Dictionary.—*Dr. Buist's Catal.*

WESTERN COAST of India includes Travancore, Cochin, and Malabar, and comprises a strip

of land of various width, lying between the sea on the western side of India, and the range of Western Ghats, which it includes. It is mostly undulating or hilly, almost everywhere covered with jungle of every description, from low bushes to the most lofty forest trees. Most of the roads here, too, are lined with splendid avenues of banyan, cashew, and various other fine trees. The climate is moist and comparatively cool. The Wynad district, and generally the wooded parts bordering the summit of the ghats, may also be included in this, which they resemble in climate and productions. The cardamom hills in Travancore are the southern continuation of the Western Ghats. Ghat is a term employed in India to designate a ferry or landing-place on a river, a range of hills, or the scarped wall of a table-land, or the defile or pass leading through or down such. The Western Ghat is the range of mountains which extend from the valley of the Tapti to the gap of Palghat, about 800 miles, and then, after an interruption, to Cape Comorin. The coast line from the sea to their base is generally flat and low, with occasional spurs or solitary hills, but the ghats rise abruptly almost scarped to an average height of 3000 feet; but Purunder is 4472, and Mahabaleshwara 4700, Matheran, a projecting spur, about 3500. The Eastern Ghats extend from Orissa to Coimbatore, along the eastern side of the Peninsula of India, at distances of 50 to 150 miles from the Bay of Bengal. They are steep, and well clothed with forests. The country lying between them and the sea is low, scarcely rising 100 feet above the sea. See Ghat.

WHALE BIRD, Prion pachyptila, also P. desolatus of Antarctic Ocean.

WHALEBONE, an elastic substance obtained from the upper jaws of the whale, which vary in size from three to twelve feet in length, and the breadth of the largest, at the thick end, is above a foot.—*Faulkner.*

WHALES, I', King, Ki-tian, CHIN., are mammals which live in the ocean. They are included in the order Cetacea. They are the largest of existing animals, and furnish whalebone, spermaceti, and oil. Species of the whale genera occur in the Arabian Sea, Bay of Bengal, Indian Ocean, and Pacific Ocean. Several abound in those parts of the ocean lying between the Bonins and the coast of Asia, and are in great numbers in the neighbourhood of Japan. So large a creature could not escape observation, and the Greek sailors who accompanied Nearchus in his navigation of the Arabian Sea were terrified by the appearance of whales (*Κητωα*, Arrian, Hist. Ind. cap. 30). A whale was stranded on the Chittagong coast in August 1842, which measured 90 feet in length and 42 in diameter; and another on the coast of Arakan in 1851, which was 84 feet long. They have been variously classified by naturalists. One arrangement will be seen under the heading Cetacea; and Dr. John E. Gray, who was in charge of the Zoological Collections in the British Museum, gives details in that Museum catalogue. The following is a synopsis of Asiatic species of whales and dolphins:—

CETACEA.

Sec. i. Mysticete, *Gray.*
Sub-Order i. Balænoidea.
Fam. i. Balænidæ, *Gray.*
Balæna mysticetus, *Linn.*, N. Sea.
B. marginata, *Gray*, W. Australia.
Eubalæna Australis, *Gray*, Cape of Good Hope.
E. Sieboldii, *Gray* (B. Japonica, *Gray*, B. Australis, *Temm.*), Japan.
Hunterius Temminckii, *Gray*, Cape of Good Hope.
H. Swedenborgii, *Lillejeborg*, N. Sea.
Caperea antipodarum, *Gray*, New Zealand.
Macleayius Australiensis, *Gray*, Australian Seas.

Sub-Order ii. Balænopteroidea.
Fam. ii. Megapteridæ.
Megaptera longimana, *Gray* (Novæ Zealandiæ, *Gray*), N. Sea.
M. Kuzira, Japan.
Poescopia Lalandii, —? Cape Seas.
Eschrichtius robustus, *Gray*, N. Sea, Sweden.

Fam. iii. Physalinidæ.
Benedenia Knoxii, *Gray*, North Sea, Welsh coast.
Physalus antiquorum, North Sea, Greenland.
P. Duguidii, *Gray*, N. Sea, Orkneys.
P. Patachonicus, Rio Plata.
Cuvierius Sibbaldii, *Gray*, N. Sea.
Rudolphius laticeps, *Gray*, N. Sea.
Sibbaldius borealis, *Gray*, N. Sea.
S. Schlegelii, *Gray*, Java.
S. Antarcticus, *Gray*, Buenos Ayres.

Fam. iv. Balænopteridæ.
Balænoptera rostrata, *Gray*, N. Sea.
Swinhoa Chinensis, *Gray*, Formosa.

Sec. ii. Denticete, *Gray.*
Sub-Order iii. Physeteroidea, *Gray.*
Fam. v. Catodontidæ.
Catodon macrocephalus, *Gray*, Tropical Seas.
Meganeuron Krefftii, *Gray*, Australian Seas.

Fam. vi. Physeteridæ.
Physeter tursio, *Linn.*, N. Sea, Scotland.
Kogia breviceps, *Gray*, Cape of Good Hope.
K. Macleayii, *Gray*, Australia, India.
Euphysetes Grayii, *Macleay*, Australia.

Sub-Order iv. Susuoidea.
Fam. vii. Platanistidæ.
Platanista Gangetica, *Gray*, India.
P. Indi, *Gray*, Indus.

Sub-Order v. Delphinoidea.
Fam. viii. Iniidæ.
Inia Geoffroyii, *Gray*, Brazil, Amazon.

Fam. ix. Delphinidæ, *Gray.*
Tribe i. Stentonina.
Pontoporia Blainvillii, *Gray*, S. Atlantic.
Steno frontatus, *Gray*, Indian Ocean.
S. compressus, *Gray*, S. Sea.
S. Capensis, *Gray*, Cape of Good Hope.
S. lentiginosus, *Gray*, India.
S. Tucuxi, *Gray*, Brazil, Amazon.
S. attenuatus, *Gray*, India.
S. fuscus, —?

Tribe ii. Delphinina.
Delphinus longirostris, *Gray*, Malabar, Japan, Cape of Good Hope.
D. delphis, *Gray*, N. Sea, N. Atlantic, Mediterranean.
D. Moorei, *Gray*, S. Atlantic.
D. major, *Gray*, —?
D. Walkeri, *Gray*, S. Atlantic.
D. Janira, *Gray*, Newfoundland,

D. Forsteri, *Gray*, Pacific.
Clymenia stenorhyncha, *Gray*.
C. microps, *Gray*, Brazil coast.
C. alope, *Gray*, Cape Horn.
C. euphrosyne, *Gray*, N. Sea.
C. styx, *Gray*, W. Africa.
C. gudumu, *Elliot*, India.
C. pomeegra, *Elliot*, —?
C. normalis, —? —?
C. doris, *Gray*, —?
C. euphrosynoides, *Gray*, —?
C. dorides, *Gray*, —?
C. obscura, *Gray*, S. Pacific.
C. similis, *Gray*, Cape of Good Hope.
Sotalia Guianensis, *Gray*, British Guiana.
Delphinapterus Peronii, *Gray*, New Guinea.
Tursio truncatus, *Gray*, N. Sea, Mediterranean.
T. metis, *Gray*, —?
T. cymodoce, *Gray*, —?
T. eurynome, *Gray*, India, Bay of Bengal, S. Sea.
T. catalania, *Gray*, N.W. coast of Australia.
Eutropia Dickiei, *Gray*, S. Pacific, Chili.
E. Heavisidii, *Gray*, Cape Seas.
Orcaella brevirostris, *Gray*, Indian Ocean.

Tribe iii. Lagenorhynchina.
Electra obtusa, *Gray*, —?
E. Asia, *Gray*, —?
E. fusiformis, *Gray* (Delphinus fusiformis, *Owen*), India.
E. acuta, *Gray*, N. Sea.
E. clancula, *Gray*, S. Pacific.
E. thicolea, *Gray*, W. coast, N. America.
Leucopleurus Arcticus, *Gray*, N. Sea.
Lagenorhynchus albirostris, *Gray*, N. Sea.

Tribe iv. Phocænina.
Pseudorca crassidens, *Gray*, N. Sea.
P. meridionalis, *Gray*, Van Diemen's Land.
Phocæna communis, *Gray*, N. Sea.
Acanthodelphis spinipennis, *Gray*, Brazil.
Neomeris phocænoides, *Gray*, Indian Ocean, Bengal Bay, Japan, Cape of Good Hope.

Tribe v. Orcadina.
Orca gladiator, *Gray*, N. Sea.
O. intermedia, *Gray*, —?
O. magellanica, *Gray*, Buenos Ayres.
O. destructor, *Gray*, Peru.
O. Capensis, *Gray*, S. Ocean, Cape of Good Hope.

Fam. x. Globiocephalidæ, *Gray*.
Globiocephalus svineval, *Gray*, N. Sea.
G. Edwardsii, *Gray*, Cape of Good Hope.
G. Grayii, *Burmeister*, Buenos Ayres.
G. macrorhynchus, *Gray*, S. Seas.
G. Indicus, *Gray* (G. Sieboldii, *Gray*), Japan.
Sphærocephalus incrassatus, *Gray*, British Channel.

Fam. xi. Belugidæ.
Grampus Cuvieri, *Gray*, N. Sea.
G. Richardsonii, *Gray*, Cape of Good Hope.
Beluga catodon, *Gray*, N. Sea.
B. Kingii, *Gray*, Australia.
Monodon monoceros, *Gray*, N. Sea.

Sub-Order vi. Ziphioidea.
Fam. xii. Hyperoodontidæ.
Hyperoodon butzkopf, *Gray*, N. Sea.
Logenocelus latifrons, *Gray*, N. Sea.
Fam. xiii. Epiodontidæ.
Epiodon Desmarestii, *Gray*, N. Sea, Mediterranean.
E. cryptodon, *Burmeister*, Buenos Ayres.
Petrorhynchus Caponsis, *Gray*, S. Seas, Cape Seas.
Fam. xiv. Ziphiidæ.
Berardius arnuxi, *Gray*, New Zealand.
Ziphius Sowerbiensis, *Gray*, British Channel, Irish Sea.
Dolichodon Layardii (Ziphius Layardii, *Gray*), Cape of Good Hope.
Diplodon Sechellensis, *Gray* (Ziphius Sechellensis), Seychelles.

Mr. Isaac Walton, a telegraphic officer in the Persian Gulf, in a report to the Bombay Government about the year 1877, says:—'The cable from Kurachee to Gwadur, about 300 miles long, was suddenly interrupted on the evening of the 4th, at a point estimated to be about 116 miles from Kurachee. The *Amberwitch* arrived at this place about two o'clock on the afternoon of the 6th, and the cable was hooked at a quarter of a mile from the point of rupture. In hauling in the cable an unusual strain was experienced, as if the cable had fouled a rock, but, on persevering for some time, the body of an enormous whale, entangled in the cable, was brought to the surface. It was found to be firmly held by two and a half turns of the cable, taken immediately above the tail. Sharks and other fish had partly devoured the carcase, which was rapidly decomposing, the jaws coming adrift on arriving at the surface. The tail, which was twelve feet wide, was perfectly preserved, and was covered with numerous shells at its extremities. Apparently the whale had rubbed itself against the cable for the purpose of ridding itself of parasites, and had with a stroke of the tail broken the cable, and at the same time so coiled itself up in it as to be strangled thereby.' Several cables have been destroyed by other creatures in which different seas abound. One of the most destructive is the Limnoria terebrans, a little creature only about as big as an ant. Yet, according to Dr. Carpenter, it has before now shown itself capable of imperilling the safety of bridges and harbour piers. Several cables off the coast of Ireland have been very seriously damaged by it. It is small enough to be able to squeeze in between the wires in the sheathing of a cable, however well it may be constructed.

The cachalot, Physeter macrocephalus, is the sperm whale; the male ranges in length from 38 to 76 feet, and is about 60 feet on the average, but the female does not exceed 30 or 35 feet. The cachalot is without symmetry, of a prevailing dull-black colour, occasionally marked with white, especially on the abdomen and tail. They propel themselves round by striking and pulling against the water with the flashes of their tails. The lower jaw is diminutive, slender, and in form not unlike the mandible of a bird; the teeth of the upper jaw, wholly ivory, in aged males are of great solidity, and weigh from two to four lbs. each. It spouts a thick watery mist from its nostrils at intervals of 10 or 15 minutes. Its

valuable sperm is a solid mass of soft yellow oily fat, weighing between two or three tons, in a hollow of the head. The cavity, called case, is situated to the right and beneath the spouting canal, and corresponds to nearly the entire length of that tube. It is filled with a very delicate well of cellular tissue, containing in large cells a limpid and oily fluid, which is liberated on the slightest force. The quantity, chiefly spermaceti, contained in this singular receptacle is often very considerable, and nearly 500 gallons have been obtained from the case of one whale. It has been noticed in the Mediterranean, and a stray individual in the Thames, but occurs in the Pacific, Indian, and Chinese seas. The liquid first drawn from the head of the animal is a mixture of spermaceti and sperm oil; from this the solid matter is separated by filtration through bags, and subsequent compression. After this it is melted in water, skimmed, and re-melted with a little potash water, to remove the last traces of the oil; lastly, it is permitted to concrete slowly, during which it is crystallized in brilliant white masses. Pure spermaceti is white, tasteless, inodorous, crystalline, insoluble in water, slightly soluble in boiling alcohol; it forms a soap with potash. It is composed of carbon, 81·66; hydrogen, 12·86; oxygen, 5·47. Spermaceti was once much used internally as a demulcent and emollient, especially in troublesome catarrhs and ysentery. It is at present employed solely as an external application, being an ingredient in numerous cerates and ointments. Mr. Beale gives 84 feet as the length of a sperm whale of the largest size, and its diameter 12 or 14 feet. Of this huge mass, the head occupies about one-third of the entire length, with a thickness little inferior to that of the body; while, as this thickness is equal throughout, the front of the head terminating abruptly, as if an immense solid block had been sawn off, this part of the animal bears no small resemblance to an immense box. The appearance of a whale when disturbed, and going what seamen call 'head-out,' with his vast bluff head projected every few seconds out of water, has a most extraordinary appearance.

The pursuit of the sperm whale is attended with much greater danger than that of the Greenland whale, and Beale gives many instances in which, in his own experience, boats were stove in and men lost. Stories of fighting whales, he says, are numerous, but probably exaggerated; one, known as 'Timor Jack,' is said to have destroyed every boat sent against him, till at last he was killed by being attacked from several directions at the same time, thus diverting his attention from the boat which made the successful attack. Another, known as 'New Zealand Tom,' destroyed nine boats successively before breakfast, and when eventually captured, after destroying many other boats, many harpoons from the various ships which had attacked him were found sticking in his body. There is one well-authenticated instance of a vessel being attacked and destroyed by a sperm whale. The American whale-ship *Essex* was attacked by one, which, first passing under the vessel, probably by accident, came in contact with her keel and carried it away; then, turning and rushing furiously upon the ship, the whale stove in her bow; so serious was the breach, that the vessel speedily filled and went down. Most of the crew were away in their boats at the time, but those on board had just time to launch their one remaining boat before the vessel sank. The boats made for the coast of Peru, the nearest land, many hundreds of miles distant; one of them was picked up drifting at sea, and three of the crew, who were found in it in a state of insensibility, were the only survivors of the ill-fated vessel.

In addition to the sperm and oil, this species yields another product, which is, or was, very valuable, although it is the result of disease, and one would imagine a very uninviting substance. It is the ambergris, a concretion of the indigestible portions of the cuttle-fish, which form the food of the sperm whale. The nucleus of the mass is generally the horny beaks of these creatures, and the substance itself is found in the intestines of the sperm whale, or on the shores of the seas frequented by this species. No other whale is known to be subject to these bezoars.

Although possessing a range greater than any other known species of animal, it is only open and deep waters which can be said to be the home of the sperm whale; and when found in shallow seas, its generally emaciated condition indicates the absence of its proper nourishment; and the readiness with which whole herds precipitate themselves stupidly upon the sands, shows how little they are acquainted with such objects.

Every favourite resort of the sperm whales, although not out of soundings, has claims to be considered the site of submerged land. The islands of the Polynesia, which are its special feeding-ground, are the beacons left by the submerged Pacific continent.

Seven species of whales are known to the Japanese, — the awo-sangi, iwasikura, kud-suri, mako, nagass, sebio, and sutukad-sura. The skin, which is black in most kinds; the flesh, which is red and looks like beef; the intestines, which from their remarkable length are called feakfirs, that is, an hundred fathoms long; and all the inward parts,—are eaten, pickled, boiled, roasted, or fried. The fat or blubber is boiled into train-oil, and even the sediments of the second boiling are eaten. The bones, such as are of a cartilaginous substance, are boiled when fresh, and cut or scraped, cleaned and dried for the use of the kitchen. Several little things are made of the jaw-bones, fins, and other bones, which are of a more solid substance, and particularly their fine steelyards for weighing gold and silver are made of them, and have borrowed their name from them.—*Williams' Middle Kingdom*, p. 258; *Tennent, Ceylon*, p. 68; *American Expedition*, p. 243; *Capt. Sparkes in B. A. S. Journ.*, 1852; *Ouseley's Tr.* i. pp. 150, 230; *Arrian, Hist. Ind.* cap. 30; *Kæmpfer's Japan*, i. p. 133; *Hartwig; O'Sh.; Gosse's Nat. Hist.* p. 115; *Smith*, p. 230; *Jerdon's Mammals; Gray, Catalogue.*

WHAMPOA, a town built on Bankshal Island, in the Canton river. Two high islands, by Europeans commonly called Danes and French islands, form Whampoa anchorage, in lat. 23° 6½′ N.

WHANGHEE. JAP., MALAY. A name derived from the Chinese Wang, yellow, and Hee, root, a species of cane exported from China. The whanghee cane has a pale, hard bark and flexible stem, with intervals of about an inch and a half or

two inches, and a number of little holes at the knots. These small canes, with short internodes, are imported from China into England as walking-sticks.

WHEAT.

Hintch, ...	ARAB.	Grano, Formento, . .	IT.
Lai, Siau-mei, . .	CHIN.	Gandum, Trigo,	MALAY.
Kia-size-ts, . .	,,	Khanak, ...	PANJ.
Hvede, ...	DAN.	Gundum, ...	PERS.
Tarw, ...	DUT.	Pszenica, ...	POL.
Froment, Bled, Ble,	FR.	Trigo, ...	PORT.
Weitzen, ...	GER.	Pschenitz, ...	RUS.
Purvi, ...	GR.	Hvete, ...	SW.
Khittah, ...	HEB.	Godumbi, ...	TAM.
Gehun, ...	HIND.	Godumalu, . . .	TEL.

The geographical range of the wheat region along the Atlantic portions of the western continent, embraces the tract lying between the 30th and 50th parallels, and, in the country westward of the Rocky Mountains, one or two more degrees farther north. Along the west coast of South America, as well as in situations within the torrid zone, sufficiently elevated above the level of the sea, and properly irrigated by natural or artificial means, abundant crops are often produced. Wheat has, from time immemorial, been a staple crop in the plains of Northern India, and especially in the Panjab. The climate and soil are well fitted for this cereal, but, owing to defects and carelessness in the agriculture and harvesting, the crops, though excellent, fall short of what most corn-growing countries produce.

Wheat is grown to a great extent in Berar, in Coimbatore, and largely in Burma, and it is now largely and increasingly exported from India, viz.:

1874-75, . .	1,069,076 cwt.	Rs. 49,04,352
1875-76, . .	2,498,185 ,,	90,10,255
1876-77, . .	5,583,336 ,,	1,95,63,325
1877-78, . .	6,340,150 ,,	2,85,69,899
1878-79, . .	1,044,709 ,,	51,37,785
1879-80, . .	2,195,550 ,,	1,12,10,148
1880-81, . .	7,444,375 ,,	3,27,79,416
1881-82, . .	10,863,520 ,,	8,60,40,815
1882-83, . .	14,151,765 ,,	6,07,13,170

In 1883, Messrs. M'Dougall Brothers were requested by the India Office to take a given quantity of the four representative Indian wheats, viz. Indian 'fine soft white,' 'superior soft red,' 'average hard white,' and 'average hard red,' and manufacture them into flour by the ordinary process of grinding under millstones; also that similar quantities should be manufactured into flour by means of crushing between rollers, according to what is known as the Hungarian or roller system; further, that a given quantity of each flour should be manufactured into bread; that the qualities and other characteristics of the flours and offals thereof should be severally noted; and that the Indian wheats should be severally compared with all the leading varieties of home and foreign wheats. They reported that they all possess, in a marked degree, the same characteristics of great dryness and a distinct beany and almost aromatic flavour, inseparable from wheats grown in the climates and soils of the tropics. Also, that the flours are ricey, the texture of the bread is too close, and the crust is hard and brittle. But these characteristics do not detract from their usefulness in any important degree. A miller cannot show skill in his craft to greater advantage or profit than in the way he selects his wheats and mixes his grists, so as to produce to best advantage a flour from which bread can be made of the colour, bloom, strength, and flavour desired, and withal a good yield. Messrs. M'Dougall pronounced the Indian wheats to be exceedingly useful wheats,—in fact, hardly equalled, for what is deficient in the English market, by any other wheats. Their chief characteristics are just those in which wheats grown in the variable British climate are most deficient. Their great dryness and soundness render them invaluable for admixture with English wheats that are in any degree out of condition through moisture; and the great proportions of the wheat harvested here have been in that condition for years past,—a condition that must prevail in all other than that of wheats harvested and stored during fine and favourable weather.

In London the lowest points in the 19th century as respects the annual average price of wheat was 38s. 7d. in 1851; in 1835 it was 39s. 4d.; and in 1864, 40s. 3d. The following has been the yearly average price of wheat during the past 25 years:

Year.	s.	d.	Year.	s.	d.	Year.	s.	d.
1859, . .	43	9	1868, . .	63	9	1876, . .	46	2
1860, . .	53	3	1869, . .	48	2	1877, . .	56	9
1861, . .	55	4	1870, . .	46	11	1878, . .	46	5
1862, . .	55	5	1871, . .	56	8	1879, . .	43	10
1863, . .	44	9	1872, . .	57	0	1880, . .	44	4
1864, . .	40	3	1873, . .	58	8	1881, . .	45	4
1865, . .	41	10	1874, . .	55	9	1882, . .	45	1
1866, . .	49	11	1875, . .	45	2	1883, . .	41	7
1867, . .	64	5.						

In India, several species and varieties of wheat are grown, viz.:

Triticum vulgare, *Var.* hybernum or winter wheat.
T. vulgare, *Var.* æstivum or spring wheat.
T. compositum, Egyptian wheat.
T. spelta, bere or spelt, much cultivated in France.
T. monococcum, remarkable for its single row of grain.

That which is chiefly cultivated in England is the T. vulgare. Of this there are two varieties,—T. æstivum or summer wheat, and T. hybernum or winter wheat; the former is sown in the spring, and the latter in the autumn. Of these varieties, again, there are several different modifications.

In India, wheat of all kinds is the growth of the rabi or spring harvest. The number of varieties in the Panjab is not in reality very great, though considerable difference of nomenclature exists. Wheat is sown in the months of Kartak and first half of Maghar, and is cut in Baisakh (April). Wheat is often sown mixed with barley; this is called goji in the Panjab, and trikala in Cis-Sutlej States; or with gram, Cicer arietinum, and then called bhera; or the red and white varieties are sown together under the name of jogyan. The principal difference observable in Panjab wheats is that some are bearded and some are awnless. There are two sorts of the bearded wheat, one with a dark-coloured beard, the other with a light-yellow beard.

Gerard speaks of wheat at 10,000 and Captain Webb at 12,000 feet on the southern slope of the Himalaya. The extreme limit is given at 13,000 to 15,000 feet. Wheat grows to a height of 13,000 feet at Lara and Ladang, above Dangk-kar in the Spiti valley. In the valley of the Indus, it appears at Ugshe and Chimra at 11,000 to 12,000 feet. A wheat, called daud-khani, with a large and very white grain, was introduced from the N.W. Provinces, and grown chiefly on the banks of the Sutlej, on alluvial and irrigated lands. It is much used by sweatmeat makers on account of its being so white. It sells, where grown, at about 31 to

32 seers per rupee, always cheaper than pamman, being considered inferior.

Multan wheat is beardless, and its grain long and heavy. It is exported in large quantities to Rajputana and to Sind.

Four kinds of wheat are grown in Oudh, called Safeda, Morilwah (which is awnless), Samodwah, and Lallia. The first two are the best kinds, and were sold from 16 to 40 seers per rupee, according to the abundance of the season. The other two kinds are those most generally sown. When the wheat crop is from 4 to 6 inches high, it is irrigated once, and then a second time when it begins to flower. It is grown on heavy soils, and generally near the banks of rivers. It is sown in October.

In Sumbulpur district, wheat is extensively cultivated. The flour made from it is excellent, as is the bread.

A beautiful wheat is produced in the Jubbulpur, Narsingpur, and Hoshangabad districts, all along the line of the railway to Bombay.

Wheat is grown largely in the Burmese territories. The soil of Pegu is too moist, and the climate too damp for it.

Wheat is grown to a considerable extent in the Bara-Mahal district of the Madras Presidency.

All kinds of wheat contain water in greater or lesser quantities. Its amount is greater in cold countries than in warm. In Alsace from 16 to 20 per cent.; England from 14 to 17 per cent.; United States from 12 to 14 per cent.; Africa and Sicily from 9 to 11 per cent. This accounts for the fact that the same weight of southern flour yields more bread than northern; English wheat yields 13 lbs. more to the quarter than Scotch. Alabama flour, it is said, yields 20 per cent. more than that of Cincinnati. And in general, American flour absorbs 8 or 10 per cent. more of its own weight of water in being made into bread than the English. The English grain is fuller and rounder than the American, being puffed up with moisture. To ascertain the amount of water in flour, take a small sample, say five ounces, and weigh it carefully; put it into a dry vessel, which should be heated by boiling water; after six or seven hours, weigh it; its loss of weight shows the original amount of water.

Bombay wheat is whiter and heavier than that from Kattyawar, and produces a greater quantity of soojie and flour. That of Kattyawar is smaller and darker, and produces good flour, though smaller in quantity, with less soojie.

Added to their dryness, the thinness of the skins of Indian wheats, and the consequent greatness of the yield of flour, must always place them in the front rank as a miller's wheat, whenever they are handled with reasonable intelligence and skill. Such unprecedented yields of flour as shown by these wheats, ranging (by ordinary grinding) from 77·46 to 80·52 per cent., against English 65·2, and American spring 72·2, speak volumes in their favour; and their value is still further increased by another point of merit of almost equal importance, viz. a larger percentage of bread may be obtained than from other flours. For the best of these Indian wheats (the fine soft white), on the day they were valued on Mark Lane Market, a price was offered as high as that for American 'winters,' New Zealand, or English. The beaty flavour of the other three sorts is not a serious obstacle, as fair average deliveries, when well cleaned and properly dealt with, can be employed in the proportion of 25 to 50 per cent. along with home-grown or other wheats, such as Americans, possessing a fine sweet milky or nutty flavour. Glancing at all the facts, Messrs. M'Dougall think it is evident that these wheats afford a larger margin of profit, both to the miller and the baker, than any other.

Wheat is largely used in China. It is exclusively raised in the provinces of Ho-nan, Shen-si, Shan-si, Shan-tung, and Peh-chi-li. As a rule, it is sown in winter, although occasionally as a spring crop. It is usually sown broadcast.

India's best soils yield on the average ten bushels per acre, while England yields near 30 bushels the acre. Sir J. B. Lawes has raised 43½ bushels of 62 lbs. Each additional bushel to the acre of the present cultivated area of India is equal to the yearly maintenance of 22 millions of people.

WHEAT-MIDGE, Cecidomyia tritici, a fly and its caterpillar, infesting wheat.

WHEELER, J. TALBOYS, author of Madras in the Olden Time; The History of India from the Earliest Ages; The Geography of Herodotus; i. The Vedic Period and the Mahabharata, ii. The Ramayana and the Brahmanic Period; Rare and Curious Narratives of Old Travellers in India in the 16th and 17th Centuries.

WHIRLPOOLS.

Yay-way, ... Burm. | Gird-ab, ... Pers.

These occasionally occur in the Ganges and Irawadi. A native writing of one which he saw near Koostee, says he saw the water within two or three miles whirling into a cavity several yards deep, which, after an interval, disgorged that which it had previously taken into it.

WHIRLWIND.

Lay-boay, ... Burm. | Gird bad, ... Pers.
Devil wind, . . . Eng. | Peshash, ... Tam.

The whirlwinds which occur in the desert west of Kharan, near Ragan in Baluchistan, would perhaps be more correctly called by some other name. They are vast columns of sand, which begin by a trifling agitation with a revolving motion on the surface of the desert, and gradually ascend and expand, until the tops of them are lost to the view, in which manner they move about with every breath of wind like a pillar of sand. Lieut. Pottinger saw at the same time 30 or 40 of them of different dimensions, apparently from 1 to 20 yards in diameter. Those who have seen a waterspout at sea may exactly conceive the same formed of sand on shore. Whirlwinds are extremely common in the Panjab, and in the central parts of the Peninsula of India, and some of them are supposed to be owing to electric action. Dr. Adams, writing of them, observes that about noon, when the west wind sets in, clouds of sand sweep across the country, penetrating through the minutest chinks and crevices. Whirlwinds are then of frequent occurrence. At a distance they look like revolving clouds of smoke, shooting upwards fully 200 feet. These cycloidal movements often last for upwards of half an hour, and carry with them whatever light substance they may encounter; after gliding along for some distance they finally disappear. The meeting of two opposite currents of air is no doubt at times the cause, inasmuch as a whirlwind was always seen to commence at the corners of two ranges of buildings placed at

right angles to each other. The following note of the loss of polarity by the needle during a whirlwind is given in a letter in the Bombay Times, May 30, 1846:—

'There is a class of magnetic local perturbations apparently confined to these seas, one of which was experienced by the *Queen* on her late voyage from Aden, which we do not remember to have seen noticed by magneticians. When about three hundred miles from Bombay, the people on board the steamer observed the atmosphere get suddenly clouded all around with that strange lurid appearance which indicates the approach of a burst of rain or hurricane. By and by appeared overhead those strange and turbulent vapours commonly attendant on a whirlwind or waterspout, and a light whirlwind accordingly made its appearance. At this time the magnetic virtue of the compass appeared to vanish: the needle lost its polarity and traversed equally in all directions. A state of matters so surprising was of short endurance; the sky cleared without a tempest, and all went well again. It was, we think, about A.D. 1844, that an incident of this sort was met with by the H. C. schooner *Maki* on her way from the Persian Gulf. She was surrounded by beautiful groups of whirlwinds and waterspouts ranging about her in all directions, when suddenly the needle lost its polarity, and continued for some time useless for the purpose of steering.'

Dr. Bradley has clearly established the fact that the lesser whirlwinds at all events are either due to direct electrical agency, or are characterized by the most striking electrical exhibitions.—*Pottinger's Tr.; Adams.*

WHITE ANTS, or Termites, literally build a cell round the great progenitrix of the community, and feed her through apertures. Whenever buildings are infested with the destructive white ants, their nests containing the queen ant will always be found in the immediate neighbourhood; and as the destruction of the queen ant destroys the colony, there is no reason why any building should suffer from this destructive insect; and instructions are now given generally for digging up the white ants' nests in the neighbourhood of all public buildings. As a royal cell not unfrequently contains two, and sometimes three queens, and several royal cells, containing one or more queens, may frequently be found in the same nest, the ground should be excavated until the entire destruction of the nest has placed the destruction of all the queens beyond doubt. Vegetable wax has been found efficient in checking the approach of the white ants. Cultivators of sugar-cane know how destructive are the ravages of these insects, and the following is said to be an efficacious, though rather tedious remedy:—

Asafœtida (hing), 8 chittak; mustard seed cake (Surson ki-khulli), 8 seers; putrid fish, 4 seers; bruised butch root, 2 seers; muddur, 2 seers. Mix together in a large vessel with water sufficient to make them into the thickness of curd; then steep each slip of cane in it for half an hour before planting; and, lastly, water the lings three times previous to setting the cane, by irrigating the water-course with water mixed up with bruised butch root, or muddur, if the former be not procurable. White ants can be completely extirpated from a cane plantation by manuring the soil well with mustard cake, and stirring it up constantly.

A mixture of quicklime, soap, and tar, smeared where the white ants appear, puts an effectual stop to their inroads. Tar, turpentine, kerosene oil, earth oil, and margosa oil are also valuable; wood-ashes also are of value, sprinkled about the orifices of the dwellings, and smoking them out with wet straw; the Acorus calamus, steeped in water, is said to be of use. Sarcostemma acidum is employed in the west of India to destroy them. The Poona Observer states that tobacco decoction was applied to a piece of ground where for eleven years the white ants had destroyed everything put down; their removal was most effectually secured by the sprinkling of the decoction. Solutions of salts, ashes, and quicklime prove temporarily efficacious; and if dry ashes be put into an ant-hill, and hot water poured in, the ants will be killed.

In existing buildings, auger holes from the top of the beams near the walls may be bored, and fish oil or the earth oil (naphtha) poured in, and allowed to find its way into the wood. In short, a process similar to creosoting extemporized. Fish oil is effectual, and is more readily diffused through the wood.

A coating of tar, creosoting, and impregnation with dilute sulphate of copper, by means of Boucherie's apparatus, appear effectually to preserve timber and other substances from the attacks of white ants.

Few timbers (unless they have gone through some creosoting or kyanizing operation) can be said to be quite impervious to the attacks of white ants. The wood of the Strychnos nux vomica is, however, quite proof against them, probably owing to the very bitter properties of the timber. The sal or Shorea robusta, also, as far as has been observed, quite withstands their attacks. The harder timbers of India, such as the iron-wood or mesua, the Soymida febrifuga, and the acha or Hardwickia binata, are the least susceptible of injury by this insect. The timbers which have proved least susceptible of injury by white ants are teak, pedouk, Trincomalee, and rose.

Like a species of the ant that secretes formic acid, so the white ant secretes termic acid, with which it softens and moulds the soil it excavates from the earth to build its mounds and nests. To the former it gives solidity when hardened by time; to the nest itself it gives some elasticity and a corrugated leathery appearance when moist or recently excavated. Should the nest be freely handled, it causes some irritation, and stains the fingers slightly. Owing to this acid property, the white ant earth is in use as an embrocation when applied to sprains or bruises in native medicine. In native veterinary practice, it is in general use for such purposes, when boiled with an equal portion of cow-dung and applied warm to the swollen part, under the name of Leep.

Kirby and Spence (Introduction to Entomology, p. 312) say of the Termes lucifugus, a variety of the white ant, 'These insects seem to be furnished with an acid of a very penetrating odour, which is perhaps useful to them for softening the wood.' This odour to a moderate extent exists in the fresh excavated nest of the common white ant or Termitidæ.

The frosted appearance of glassware covered with the mud of the white ant, is caused by the acid secreted by this insect, which Dr. Shortt named termic acid, in an essay submitted to the St. Helena Government through the Madras Government in 1862 or 1863, when the St. Helena Government had offered a prize for the detection and destruction of white ants in that colony, which was said to cause much destruction to houses and

property.—*Mr. Simpkins; Mr. Rohde; Mr. Smart; Col. Simpson; Dr. Hunter; Captain R. H. Beddome; Captain Dangerfield; Col. T. H. Campbell, in Proceedings, Madras Military Board; Poona Observer; Dr. Shortt.*

WHITE ELEPHANTS are reverenced by the Burmese and Siamese. All the white elephants now existing in Siam and Burma are of a light mouse colour, somewhat of the same tint as the pale freckles to be found on the trunk of almost every ordinary elephant. This light-grey is uniform all over, the spots on the trunk being white. The depth of the colour varies greatly. To be regarded as a white elephant, it must have five toe nails on its hind feet instead of four. These are white elephants debased by sin. The final test is to pour water on the elephant; if a white elephant, it turns red, while a black elephant becomes blacker. The colour of the present Sinpyoo-daw of Burma is a mixture of light-brown, and dingy, smoke-smirched cream colour. The iris ought to be yellow, with a reddish outer annulus. Buddhists, since the Christian era at least, have venerated white elephants. In the Tree and Serpent Worship (plate xxxiii.) there is a bas-relief containing a short epitome of the life of Buddha. It begins with Maya's dream. She is represented as lying asleep on her couch on the terrace of the palace, and dreaming that a white elephant, which is represented in the bas-relief, appeared to her, and, as she dreamt, entered her womb. This was interpreted by Brahmans learned in the Veda as announcing the incarnation of him who was to be in future the deliverer of the world from pain and sorrow. This was in the 1st century of the Christian era. About 30 years afterwards, in the sculptures of the tope at Amaravati (plates lxv., lxxiv., xci. of the same work), the same story is repeated, but with more detail, and carried still further. The white elephant is brought down from heaven in great state, borne in a canopied car carried by Devata, and accompanied by music and dancing. This occupies a whole panel by itself. In the next, Maya is represented as asleep, the white elephant above her, as in the former bas-relief. In the other sculptures she is represented standing, holding a branch of a sal tree, and the infant Buddha is delivered from her side and received by the god Indra and attendant Devata. In the great temple of Boro Buddor, in the island of Java, the same scene is represented (i. plate xxviii. fig. 25 of the great Dutch work on the subject). Maya is asleep on her couch, surrounded by numerous attendants, and the white elephant appears from heaven, not borne in state as at Amaravati, but resting on heavenly lotus flowers. He is, however, represented as worshipped, at least with the royal umbrella borne over him, in the next plate (xxix.). These bas-reliefs were executed about the 6th or 7th century A.D.—*Dr. James Fergusson.*

WHITE GRUB is the Ancylonycha, *sp.* See Bug; Coffee; Insects.

WHITE LEAD, Carbonate of lead.

Asfeidaj, ... ARAB.	Plumbi carbonas, . LAT.
Fen-yuen, Fen-sih, CHIN.	Suffedah, ... PERS.
Kwan-fen, Shwui-fen, ,,	Muthu vullay, . . TAM.
Plom carbonate, . . FR.	Sibaydu, ... TEL.
Bleiweiss, . . . GER.	Istibedah, ... TURK.
Cerussa, ... IT.	

Is usually made by suspending thin plates of lead over heated vinegar, the vapour of which corrodes the metal, and converts it into a heavy white powder. Mixed with oil, it forms a common paint; it is also employed in medicine.—*Faulkner.*

WHITE PEPPER.

Safed mirch, GUJ., HIND.	Vella mellogu, . . TAM.
Piper album, . . . LAT.	Tella mirrialu, . . TEL.

The fruit of a slender climbing plant, Piper nigrum, gathered after it is fully ripe, and freed of its dark coat by maceration in water. It is smooth on the surface, and is milder than the black pepper. The plant is extensively cultivated in Malabar, Sumatra, Siam, Malacca, etc.—*Faulkner.*

WHITING. Kullengan mutchie, DUKH.; Kellunga meen, TAM. Two or three species of fish common in Calcutta are called whiting, from their resemblance, both in form and flavour, to the European fish of that name. Corvinus coitor, *Blyth*, inhabits the estuaries of the Ganges and Irawadi. Its air-bladder makes excellent isinglass. It is frequently seen in the Moulmein basin.

WIGHT, ROBERT, M.D., of the Madras Medical Service, a distinguished botanist, and long superintending the cotton experiments at Coimbatore. He wrote on the Medical Properties of Mudar, Madras Lit. Trans., 1835, ii. p. 70; on the Nuth Grass of the Ceded Districts, ibid. 1838; on the Flax of Courtallum, from the Coromandel Coast; on the Land-winds of Coromandel, ibid. iii. p. 32; on the Acclimation of Extra-tropical Plants, ibid. v. p. 39; on the Cultivation and Preparation of Senna, ibid. p. 358. In the year 1834 was published the first volume of Wight and Arnott's Prodromus Floræ Peninsulæ Indiæ Orientalis. His smaller work was named Contributions to the Botany of India. From 1838, he began to print the Illustrations of Indian Botany, which were soon after followed by the Icones Plantarum Indiæ Orientalis, and his Spicelegium Neilgherriensis; and in addition many papers appeared in the Madras Journal of Science and in the Calcutta Journal of Natural History. He died at Reading in England, about the 18th June 1872. His Icones Plantarum, in six quarto volumes, illustrated with valuable plates, is alone a monument of his untiring industry and great ability, upon which he expended a large amount of his private funds.—*Dr. Buist's Catalogue.*

WIJAO, a sovereign of Ceylon who introduced the caste system, and which still prevails amongst the Buddhist inhabitants, though condemned by the doctrines of their teacher. The Portuguese, Dutch, and British Governments have each tried to eradicate it. The Aggana Suttan, in the Dighanikuya section of the Pitaka, enforces the eligibility of all classes, however low, to the office of the priesthood, which commands the homage of the highest; and the same doctrine is repeated in the Madhura Suttan. The Wasala Suttan contains a stanza, beginning with 'Majachcha Wasala hotin,' which runs thus: 'A man does not become low caste by birth; nor by birth does one become high caste: high caste is the result of high actions, and by actions does a man degrade himself to a caste that is low.' It was found impossible, however, to eradicate it, and caste continued to be tolerated by Singhalese kings as a social institution. In other Buddhist countries, Burma, Siam, and Tibet, the caste system does not exist in any form.—*Tennent's Ceylon.*

WIKSTRÆMIA SALICIFOLIA. *Dne.*
Thilak, ... BEAS. | Bhat-niggi, ... RAVI.

A small shrubby plant, which occurs sparingly on some of the Panjab rivers in the Himalaya at from 5500 to 7000 feet up to near the Indus; paper inferior to that from the daphne is made from its bark in Kamaon, and it furnishes a strong rope at Naini Tal.—*Dr. J. L. Stewart.*

WILD BEASTS in India destroy numbers of human beings and domestic animals. In the seven years 1875 to 1881, the average number of persons annually killed by them was 20,608, viz. by snakes, 17,404; wolves, 636; tigers, 835; leopards, 234; hyænas, 31; bears, 98; elephants, 48; other wild beasts, 1337.

Of cattle, the average numbers killed annually in the same period was 51,718, viz. by tigers, 14,125; leopards, 16,392; wolves, 11,213; snakes, 2977; hyænas, 2101; bears, 613; elephants, 31; other wild animals, 4239.

In 1883, the number of wild beasts and venomous snakes destroyed were, —wolves, 4538; leopards, 3397; bears, 991; snakes, 254,968; tigers, 1557; hyænas, 1014; elephants, 2; others, 3780.

WILD-FOWL. Ducks, teal, etc., are largely brought to the markets of the principal towns of India at certain seasons of the year. An enormous quantity breed in Tibet, including many Indian species that migrate no farther north. The natives collect their eggs for the markets of Jigatzi, Giantchi, and Lhassa, along the banks of the Yaru river, Ramchu and Yarbru and Dachen lakes. Amongst other birds, the saras, or giant crane of India, repairs to these enormous elevations to breed, but the saras (Grus antigone) breeds also south of the Himalaya, and specimens too young to fly are occasionally brought for sale even to Calcutta. Eggs are two in number, about 3¾ inches long by 2½ inches broad, of a bluish-white, with a few distantly placed rufous specks and blotches. Lake Ramchu is frequented by great abundance of water-fowl, wild geese, ducks, teal, and storks, which on the approach of winter take their flight to milder regions. Prodigious numbers of saras are seen there at certain seasons of the year, and any quantity of eggs may be collected; they are found deposited near the banks. Instances have been known of the saras breeding in captivity. The European crane, Grus cinerea, a common Indian bird, in Scandinavia breeds in extended morasses, far away from the haunts of men. It makes its nest, consisting of stalks of plants and the like, on a tussock, and often amongst willow and other bushes. Major Cunningham, in his Ladakh, etc., remarks that he shot the wild goose on the Thogji, Chanmo, and Chomoriri lake at 15,000 feet; and Colonel Bates and he shot three teals on the Suraj Dal, a small lake at the head of the Bhaga river, at an elevation of upwards of 16,000 feet. About two days' journey from Dehli is the Nujjufghur jhil, a great marsh covered with water-fowl. The method of capturing them there accords with the practice that obtains in other parts of Asia. Earthen vessels, wide enough to admit a man's head into them, and perforated with small holes, are allowed to float about for days on the surface of this jhil, until the ducks, teal, and water-fowl in general, seeing them daily, become quite accustomed to the sight, and fearlessly swim around and even approach and peck at them. This preparatory step is followed by the fowler supplying himself with a wooden float, strong enough to support him. Using it like a hobby-horse under him, he launches himself into the swamp with the earthen vessel over his head of a similar size and kind, and similarly perforated as those indicated above. The float is dispensed with in many parts of the marsh that are shallow. With a bag of network tied round his waist, he silently paddles himself along with his hands under water, until he gets among the earthen vessels and fairly amid the birds. He commences his task by quietly and patiently pulling them down one by one by their legs, and putting them into the bag, which is so well adjusted round his person that the struggles of the birds do not scare away the rest. Some use small baskets of wicker-work, with a lid of the same material, which answers the purpose better. When the bag or basket is full, the fowler recedes to the spot whence he set out on his aquatic expedition, and there empties the contents into a basket large enough to contain about four or five times the number of the small one, and then begins anew. Large nets are also laid out on favourable sites, towards which the ducks, etc., are driven, and are thus taken in great numbers.

In India may be seen, floating on the surface of the deeper waters, fleets of the Anatidæ, the Coromandel teal, the Indian hooded gull, the Caspian tern, and a countless variety of ducks and smaller fowl,—pintails, teal, red-crested pochards, shovellers, and terns; Fuligula rufina, *Pallas;* Spatula clypeata, *Linn.;* Sterna minuta, *Linn.;* Pelicanus Philippensis, *Gmel.* Pre-eminent in size and beauty, the tall flamingoes, with rose-coloured plumage, line the beach in long files. The Singhalese designate them the 'English soldier birds.' In China, the fenny margins of lakes and rivers, and the marshes on the sea-coasts, afford both food and shelter to innumerable flocks of water-fowl. The banks along the wide delta of the Pearl River and the islands in it are frequented by immense flocks of geese, teal, ducks, and other birds; and they are likewise very abundant and tame along the inland water-courses. Ducks are sometimes caught by persons who first cover their heads with a gourd pierced with holes, and then wade into the water where birds are feeding; these, previously accustomed to empty calabashes floating about on the water, allow the fowler to approach, and are pulled under without difficulty. The wild goose caught on the shores of the Pearl River, and the common goose of Chinese farmyards, do not differ much, both of them being a plain ashy-grey colour, with a large knob at the base of the upper mandible. This bird and the mandarin ducks are both considered as emblems of conjugal fidelity, and a pair of one or the other usually form part of wedding processions. The Yuen-yang, as the Chinese call this duck, is a native of the Central Provinces, and is reared chiefly for its beauty. It is one of the most variegated birds known, vying with the humming birds and parrots in the diversified tints of its plumage, if it does not equal them for brilliancy.—*Williams' Middle Kingdom,* p. 263; *Hooker, H. J.* ii. p. 161; *Tour of India by French,* p. 193; *Tennent, S. Nat. Hist.* p. 260.

WILFORD, COLONEL, an officer of the East India Company's Bengal army. In the English

burial-ground at Seehole, the most interesting monument is that of Colonel Wilford. The Hindu nation has reason to venerate the memory of this indefatigable Sanskrit scholar, who had almost Hinduized himself by a residence in Benares from 1788 to 1822, and who at length mingled his dust in the soil of that great seat of Brahmanical learning. He wrote Remarks on the City of Tagara, As. Res. i. p. 369; an Essay on Egypt, iii. p. 295; Dissertation on Semiramis, iv. p. 363; Account of Ancient Inscriptions, v. p. 135; on Hindu Chronology, v. p. 241; on the Names of the Cabirian Deities, v. p. 297; on the Caucasus, vi. p. 455; on the Sacred Isles of the West, ix. p. 32, x. p. 27, xiii; Chronology of the Kings of Magadha, ix. p. 82; on the Eras of Vikramaditya and Salivahana, ix. p. 117.—*Tr. of Hind.* i. p. 285.

WILKINS. Sir Charles Wilkins was the first European who acquired a knowledge of the Sanskrit language. He translated the Hitopadesa from the Sanskrit. He translated also into English the Bhagavat Gita, from which it was translated into the French, Russian, and German, and Schlegel produced a Latin version; gave a Glossary of Oriental Terms in the Fifth Report of the Select Committee on India Affairs, London 1813; furnished a Translation of the Monghir Inscription, As. Res. i. p. 123; of Buddal Inscription, i. p. 131; of Buddha Gya Inscription, i. p. 284; Observations on the Sikhs, i. p. 289; and wrote an Account of Two Inscriptions from the Vindhya Mountains, ii. p. 167. Author of a Grammar of the Sanskrit Language, London 1808; and Sanskrit Radicals, London 1815.—*Rennell's Memoir*, p. 332.

WILKS, Lieut.-Col. MARK, author of Historical Sketches of the South of India, London 1817, 3 vols. 4to; Translation of an Inscription on a Tambu Paka, ibid. viii. p. 736; History of Mysore, London 1810.—*Dr. Buist's Cat.*

WILLOUGHBY, Lieutenant, of the Bengal army. On the 11th of May 1857, with a mind capable of conceiving, and a heart and hand resolute and steady to perform, he blew up the magazine at Dehli.—*Tr. of Hind.* ii. p. 361.

WILLOW TREES are species of the genus Salix; the weeping willow is S. Babylonica. Willow bark contains, according to Davy, 2·3 per cent. tannin, and that of the Leicester willow 6·8 per cent. Danish leather, which has a peculiar and agreeable odour, and is used for making gloves, is prepared from kid and lamb skin by means of willow bark, which is also used in the preparation of Russia leather, but the odour of that leather is produced by the oil of birch tree bark.

WILLUGHBEIA EDULIS. *Roxb.* Luti-am, Hind. A very large climber in the forests of Chittagong and Sylhet. Every part of the plant on being wounded discharges an abundance of fluid caoutchouc. The fruit is pulpy, soft, and yellow, and esteemed by the natives. Dr. Mason says that W. Martabanica of the forests of Tenasserim produces a fruit as large as an apple, which Europeans sometimes call a kind of fig. It has an agreeable taste, but abounds in a milky juice. Its colour is yellow, and it is about the size of an orange.—*Roxb.* ii. p. 57; *Mason; O'Sh.*

WILSON. Horace Hayman Wilson went to India in September 1808 as an Assistant-Surgeon on the Bengal Establishment, and was attached to the mint at Calcutta, in association with Dr. Leyden, then next to Henry T. Colebrooke, the most distinguished orientalist in India. His studies, consistently carried through more than half a century, placed him at last the highest authority of the day upon all questions of Sanskrit literature and of Hindu theology and antiquities, as well as of the customs and social habits of the races through which that literature and religion had come down to the present generation. In 1813 he published a poetical translation of the Megha Duta, an epic poem of Kalidasa, which obtained a world-wide reputation; and he undertook the laborious task of preparing for the press, from materials collected by Colebrooke, a dictionary of the Sanskrit language with English interpretations. This was completed in 1819, and a second edition was published in 1832. It has been the key by which, mainly, the learned of Europe have obtained access to this branch of literature. His earliest article in the volumes of the Asiatic Society of Bengal was published in 1825. It was on the History of Kashmir, from the Raja Tarangini and other authorities. It attracted much attention, and was speedily translated and republished in Paris. Every subsequent volume of the Researches of this Society contains more than one contribution from his prolific pen. He compiled, in 1827, a History of the first Burmese War. He was employed by the Government of India in preparing a catalogue of the manuscripts collected by Colonel Colin Mackenzie in the south of India. In 1834 he published, under the title of the Hindu Theatre, a translation into English, with preliminary essay, of four Sanskrit dramas of antiquity. The work was received with very general favour; for the dramas were found to possess much artistic merit in the combination of incidents and in the exhibition of character; one especially, the Mrichhakati, or Play of Toy Cart, is a representation of the manners and habits of thought and condition of society in Central India at a very remote period. These four dramas, with the Sakuntala, previously translated by Sir William Jones, are among the most curious relics of Indian antiquity. But his name will live in India, and especially in Bengal, for the part he took in promoting useful instruction. He introduced the study of European science and English literature into the education of the native population. He was the Secretary to the Committee of Public Instruction at Calcutta, and he devoted himself especially to directing the studies of the Hindu College from the date of its establishment. In 1833, the University of Oxford having, through the magnificent bequest of Colonel Boden, established a Professorship of Sanskrit, Dr. Wilson was selected for that liberally-endowed situation, and was appointed also to the office of Librarian to the East India Company, in succession to Dr. Wilkins. His separate works, published after his return from India, all aimed at the wider spread of knowledge in the lore which he had so thoroughly mastered,—like his essays and translations of the Vedas and Puranas; or like his Sanskrit Grammar and Glossary of Indian Terms, for the useful purposes of instruction; or like his edition and continuation of Mill's History of British India; or like his Ariana Antiqua, on the Antiquities and Coins of Afghanistan,—with the higher aim of producing a lasting record for the information of the world at large.

He translated from the Sanskrit into English

the Vishnu Purana; Mrichhakati, or The Toy Cart; Vikrama and Urvasi, or The Hero and the Nymph; Uttara-Rama-Charita, or continuation of the History of Rama; Malati and Madhava, or The Stolen Marriage; Mudra Rakshasa, or The Signet of the Minister; Ratna Vali, or The Necklace. His prose writings were—a Sketch of the Religious Sects of the Hindus; Notice of Three Tracts received from Nepal; on the Religious Practices and Opinions of the Hindus; on the Civil and Religious Institutions of the Sikhs; The Religious Festivals of the Hindus; on Human Sacrifices in the Ancient Religion of India; on the Supposed Vaida Authority for the Burning of Hindu Widows, and on the Funeral Ceremonies of the Hindus; on Buddha and Buddhism; on the Religious Innovations attempted by Akbar; Analysis of the Puranas; Hindu Fiction; on the Medical and Surgical Sciences of the Hindus; Introduction to the Mahabharata; Introduction and Extracts from the Dasa Kumara-Charita; Account of the Panchatantra; History of Mantragupta; History of Visruta; Review of Sir F. W. Macnaghten's Hindu Law; Review of A. W. Schlegel's Bhagavat Gita; Review of Max Muller's History of Ancient Sanskrit Literature; Preface to the Sanskrit Dictionary; Notice of European Grammars and Dictionaries of the Sanskrit Language. He also gave short accounts of the Sanskrit dramas, Mahavera-Charita; Veni Samhara; Malavikagni Mitra, or Agni Mitra and Malavika; Prachandu-Pandava; Hanuman-Nataka; Dhananjaya-Vijaya; Sarada-Tilaka; Anargha-Raghava, or Murari-Nataka; Yayati-Charita; Mriganka-lega; Dutangada, or the Mission of Angada; Vidagdha-Madhava; Abhirama-Mani; Madhurani-Ruddha; Kamsa-Badha; Pradyumna-Vijaya; Sri-Dama-Charita; Dhurta-Nataka; Hasyarnava; Dhurta-Samagama; Chitra-Yajna; Kantuka-Sarvasva.

John Wilson, D.D., born in the Berwickshire burgh of Lauder, 1804, died at Bombay, 1st December 1878.

> 'From his cradle
> He was a scholar, and a ripe and good one;
> And, to add greater honour to his age
> Than man could give him, he died fearing Heaven.'

He was the first English scholar to master the original Zend texts, and he was the first missionary to educate and admit to the Christian church two converts from the faith of Zoroaster. Native female education was commenced by himself and his family, and before 1839 there were native girls' schools established in Bombay and its neighbourhood, under Dr. Wilson's superintendence, attended by between three and four hundred pupils. He delivered lectures on Natural History, Early Church History, Early Indian History, Indian Antiquities, Indian Ethnography, and the Doctrines of the Bible. His work on the Religion of the Parsees was published in 1843. A few years later, his Lands of the Bible, a storehouse of Biblical research. His next works of importance were his History of the Suppression of Infanticide in Western India; Exposure of Hinduism, Bombay 1832; Lecture on the Vendidad Sadi, 1833; Refutation of Muhammadanism in Oriental Christian Spectator, 1833, Bombay 1834, 1840; Second Exposure of Hinduism, Bombay 1834; Letter to Jaina Priests of Palitana, Bombay 1835, 1837, 1852; Discourse on the British Sovereignty in India, 1835 and 1837; Translation of the general Sirozch of the Parsees, Lond. As. Trans. 1837, iv.; Letter on Girnar Tablets, As. Trans. 1838; Note on the Worship of Vetal, Lond. As. Trans. v. 1839; Sermon to the Parsees, with an Account of their Settlement in India, etc., 1839, 1847; Notes on the Kissah-i-Sanjan, or Arrival of the Parsees in India, translated by Lieutenant E. B. Eastwick, in Bom. As. Trans. 1842, No. iv.; Vendidad Sadi, etc., in the Zend, with Framji Aspendiargi's Gujerati translation, 1842; Zarthusht-Namah of Zarthust Berham, in Persian, London 1842; Account of the Warahs and Katodis, two forest tribes, Lond. As. Trans. 1843, vii.; The Parsee Religion, as contained in the Zend-Avesta, etc., Bombay 1843; on the Sacred Literature of the Hindus, North British Review, 1844; Lands of the Bible visited and described, 2 vols., Edinburgh and London 1847; Brief Notes on certain Parthian, Bactrian, and Indian Coins, in Bom. As. Trans. January 1849; Memoir on the Cave Temples and Monasteries, and other Ancient Buddhist, Brahmanical, and Jaina Remains of Western India, in Bom. As. Trans. January 1850; on the Hazors of Scripture, with the Identification of Hazor of Kedar, Bom. As. Trans. 1852; Second Memoir on the Cave Temples, etc., ibid.; India Three Thousand Years Ago, Bombay 1858.—*Dr. Buist's Cat.*

WIND.

Bara, ...	Hind.	Vaya, ...	Sanhk.
Ang, ...	Malay.	Gali, ...	Tam.
Bad, ...	Pers.		

In 1831, Mr. Redfield of New York established the fact that storms, seemingly the most violent and lawless, moved with precision in fixed paths, and executed their rotative movements with almost the regularity of the balance-wheel. He also demonstrated that hurricanes in the northern hemisphere revolve around their centre invariably in a direction contrary to that of the hands of a watch, and the knowledge of this physical law of storms, in countless cases has saved large vessels, and even whole squadrons, from probable destruction. Captain Douglas Wales of the Mauritius, a sailor of experience and great practical knowledge and skill, in a paper on the Converging of the Wind in Cyclones, argues that on the margin of these storms, whose diameter is often several hundred miles, the wind does not always blow around the central area of the storm in concentric circles, but frequently it converges or curves inward, in nearly radial lines, upon the centre of the gale. As it is in the centre that the verticose motion of the cyclone is most intense and deadly, it is of course of the first importance to give it a wide berth. According to the 'law of storms,' as first stated by Messrs. Redfield, Reid, Dove, and others, the winds within the entire area of atmospheric disturbance blew in perfect and concentric circles around the common centre. Captain Wales, however, after multiplied observations, shows that this rule is not strictly observed by the winds. This important fact does not, however, at all overthrow, but confirms Mr. Redfield's discovery. The converging of the wind towards the centre of the revolving gale, is of course due to the centripetal force being greater than the tangential force, which is the fact observed in tornadoes.

Dust storms of India sweep along the surface of

the ground sometimes for two or three hundred miles, and cause much inconvenience.

Land and sea breezes occur on the seaboard of all tropical countries, and on all islands in the tropics. Upon the northern coast of Java, the phenomenon of daily land and sea breezes is finely developed. There, as the sun rises almost perpendicularly from the sea with fiery ardour, in a cloudless sky, it is greeted by the volcanoes with a column of white smoke, which, ascending from the conical summits high in the firmament above, forms a crown, or assumes the shape of an immense bouquet that they seem to offer to the dawn; then the joyful sea breeze plays over the flood, which, in the torrid zone, furnishes with its fresh breath so much enjoyment to the inhabitants of that sultry belt of earth, for by means of it everything is refreshed and beautiful. The transparency of the atmosphere is so great there that they can sometimes discover Venus in the sky in the middle of the day. In the rainy season the land looms very greatly, and mountains which are from 5000 to 6000 feet high are visible at a distance of 80 or 100 English miles.

In the *Red Sea* the wind from May to November is northerly, and the other six months is southerly, but there are also land and sea breezes.

Monsoons, Trade-Winds.—Mountains which lie athwart the course of the winds have a dry and rainy side, and the prevailing winds of the latitude determine which is the rainy and which the dry side. The weather side of all such mountains as the Andes is the wet side, and the lee side the dry. Were the Andes stretched along the eastern instead of the western coast of America, we should have an amount of precipitation on their eastern slopes that would be truly astonishing; for the water which the Amazon and the other majestic streams of South America return to the ocean, would still be precipitated between the sea-shore and the crest of these mountains.

The same phenomenon, from a like cause, is repeated on the mountain sides in intertropical India, only in India each side of the mountain is made alternately the wet and the dry side by a change in the prevailing direction of the wind. From October to April the north-east trades prevail. They evaporate from the Bay of Bengal water enough to feed with rain during this season the western shores of this bay. After the north-east trades have blown out their season, which in India ends in April, the great arid plains of Central Asia, of Tartary, Tibet, and Mongolia become heated up; they rarefy the air of the north-east trades, and cause it to ascend. This rarefaction and ascent, by their demand for an indraught, are felt by the air which the south-east trade-winds bring to the equatorial doldrums of the Indian Ocean; it rushes over into the northern hemisphere to supply the upward draught from the heated plains, as the south-west monsoons. The forces of diurnal rotation assist to give these winds their westing. Thus the south-east trades in certain parts of the Indian Ocean are converted during the summer and early autumn into south-west monsoons. These come from the Indian Ocean and Sea of Arabia loaded with moisture, and, striking with it perpendicularly upon the ghats, precipitate upon that narrow strip of land between this range and the Arabian Sea an amount of water that is truly astonishing. There are thus not only the conditions for causing more rain, now on the west, now on the east side of this mountain range, but the conditions also for the most copious precipitation. Accordingly, when we come to consult rain gauges, and to ask meteorological observers in India about the fall of rain, they tell us that on the western slopes of the ghats it sometimes reaches the enormous depth of twelve or fifteen inches in one day.

These S.W. monsoon winds of India continue their course to the Himalaya, dropping moisture along their course, and in crossing this range they are subjected to a lower temperature than that to which they were exposed in crossing the ghats. Here they drop more of their moisture, in the shape of snow and rain, and then pass over into the thirsty lands beyond, with scarcely enough vapour in them to make even a cloud. Thence they ascend into the upper air, there to become counter-currents in the general system of atmospherical circulation.

The greatest rainfall occurs on the slopes of those mountains which the trade-winds first strike, after having blown across the greatest tract of ocean. The more abrupt the elevation, and the shorter the distance between the mountain top and the ocean, the greater the amount of precipitation.

Sudden storms are common throughout India in the spring. For an hour before sunset, clouds are gathered in the western horizon, which is illuminated with repeated flashes of lightning, accompanied with a continued muttering of distant thunder, the atmosphere becoming oppressively sultry. Suddenly the heavens are furiously agitated, a brightening space is seen on the horizon, and they appear rapidly diverging from it as from a centre. A few large drops of rain are dashed downwards with great violence, a whirlwind rises almost instantly, and blows as if it blew its last, with a violence to which Europe is a stranger. The rain then falls as if a deluge were commencing, sudden and terrific crashes of thunder are heard above and around, and hailstones such as we have read of are often precipitated with most injurious effect. The violence of the storm is generally exhausted in about half an hour.

Hailstorms are dreaded in India, as the hailstones are often very large, and sometimes kill man and beast, as well as destroy much of the crops.

Typhoon is the European name of frightful equinoctial gales which vex sea and land about the tropics, in the eastern seas, and down as far as to 10° from the equator. The whole Eastern Archipelago is excluded from their sphere, while the whole of the Philippines is within it, the island of Mindanao alone excepted. Typhoon is said to be a word of Chinese origin, from Ta, great, and Fung, tempest. It may, however, also be from the Arabic Tufan, a storm, and that from the Arabic root Taof, he did turn. Typhoons, cyclones, and tornadoes are great rotatory winds that move along a curved line in increasing circles, sometimes centripetal. In the northern hemisphere, the rotatory movement follows a direction contrary to that of the hands of a clock; while the opposite takes place in the southern hemisphere. In maritime language, typhoons are dangerous tempests which occur in the northern part of the China Sea, along the southern and eastern

coast of China, near Formosa, the Bashee Islands, the north end of Luconia; also to the eastward of those islands, and betwixt Formosa and the Japan Archipelago. These tempests usually blow with the greatest fury near the land; as the distance is increased to the southward from the coast of China, their violence generally abates, and they seldom reach beyond lat. 14° N., although a severe gale has been experienced at times two or three degrees farther to the southward. They occur in both monsoons.

A *velocity* of 60 or 70 miles an hour is a tolerably severe gale, and a tropical hurricane rarely exceeds 100 miles an hour. On the 18th of August 1876? however, as the central vortex of storm approached Cape Lookout about half-past six in the morning, the anemometer was found to be registering 138 miles an hour. At this point the instrument gave way, the cups being violently torn from their stems. It is said, however, that an hour and a half after the break-down of the anemometer the wind was estimated to have attained a speed of 165 miles an hour, or some 30 miles an hour in excess of what rendered the Guadaloupe hurricane so famous in the annals of meteorology. This American storm is thought to have been the most violent ever recorded. A velocity of 100 miles an hour means a pressure of nearly half a hundredweight on a square foot.

In one of the most violent tempests that ever swept over London, a pressure of only 35 lbs. was registered. During a storm in Liverpool in 1863, every now and again the wind registered a velocity of 93 miles an hour, and in February 1868 it was thought to have attained 120 miles an hour, and did enormous mischief on the north-west seaboard.

The *desert* of Kharazm or Regan, from June to September, is liable to destructive hot winds, in which man and beast perish, even the hardy camel perishing miserably. The Baluchi call it Julot or Julo, the flame, also Bad-i-Simoom, or the poison wind. There is great heat of skin, quickly ending in death. The approach of the wind is ushered in by an oppressive calm in the air, and a degree of heat that affects the eyes; the precaution then adopted by travellers is to cover themselves over, and lie prostrate on the earth. A curious fact is established by this custom, that any cloth, however thin, will obviate the deleterious effects of the Bad-i-Simoom on the human body.

The hot winds on the Oxus at Hissar and in Khiva are called Tibbad. The hot wind of the sandy deserts of Central Asia, laden with fine dust, blows over Khojend and Khokand, where it is called Garm-sal, darkens the atmosphere, and kills the silk-worm. It blows through the Khojend opening into the Farghana valley. At Yarkand, in autumn, a fine dust sometimes for seven or eight days fills the atmosphere.

With the Hindus, the air, or Vayu, and the winds, or Maruts, are personified and invoked. The maruts are depicted as roaring amongst the forests, compared to youthful warriors bearing lances on their shoulders, delighting in the soma juice like Indra, and, like him, the bestowers of benefits on their worshippers.—*Maury's Physical Geography; Horsburgh; Vigne; Markham's Embassy; Reid; Capper; Piddington.*

WINE.

Inub, Khamr,	Arab.	Vinum,	Lat.
Tsa-pyit-ya,	Burm.	Bu-angur,	Malay.
Tsiu,	Chin.	Mei,	Pers.
Vin,	Fr.	Vinho,	Port.
Wein,	Ger.	Wino, Wino-gradnoe,	Rus.
Oinos,	Gr.	Draksha-rasa,	Sansk.
Dakh-ka-mad'h,	Hind.	Madira,	,,
Ungur-ka-shrab,	,,	Sarayam,	Tam.
Vino,	It., Sp.	Sarayi,	Tel.

Wines used in the south and east of Asia are almost all imported from Europe, only to a small extent from Australia. The quantities received into British India of wines and liqueurs have been latterly as under:—

	Galls.	Rs.		Galls.	Rs.
1874-75,	564,921	47,46,951	1878-79,	487,787	41,41,744
1876-77,	464,242	40,69,585	1879-80,	443,978	39,27,310
1877-78,	496,733	43,60,198	1882-83,	418,173	38,45,719

Wine is mentioned as having been known to Noah (Genesis ix. 21), who drank of the wine, and was drunken. The allegory of the trees in Judges ix. 13, speaks of the vine which cheereth God and man; and St. Paul (1 Timothy v. 23) recommends the use of a little wine for the stomach's sake. Before his time Homer had said,—

'The weary find new strength in generous wines;'

and Martial had sung,—

'Regnat nocte calix, volvuntur biblia mane,
Cum Phœbo Bacchus dividit, imperium,'

which has been rendered,—

'All night I drink, and study hard all day,
Bacchus and Phœbus hold divided sway.'

In Europe, in the manufacture of wine ripe grapes are trodden by men or cattle in a vat, and the juice which is thus forced out is called must. The marc or solid parts being mixed with the must again in wooden tanks, fermentation soon takes place, much heat is developed, and carbonic acid gas is copiously disengaged; the marc now rises to the surface of the tank, and when the effervescence ceases, the subjacent wine is drawn off from below, and the marc then subjected to strong pressure.

If the wine be bottled before the fermentation has terminated, it has the property of foaming in the glass in consequence of the sudden liberation of carbonic acid; champagne is thus manufactured. In the preparation of white wines the marc is removed before fermentation.

According to Humboldt, the conditions of climate essential for the manufacture of good wine are, a range of temperature from 62° to 50° or even 47°, provided the winter heat is not lower than 38°, nor that of summer below 66° or rather 68°. At a higher mean temperature the juice passes too rapidly into the acid fermentation. The manufacture of wine thus becomes impracticable in the plains of India; moreover, the rains set in so soon after the ripening of the grape, that the manufacture of raisins by sun-drying is equally impossible. Dr. Royle informs us of the existence of luxuriant vineyards in Kanawar, between lat. 31° and 32° N. (or nearly that of Madeira), at an elevation of 9000 to 10,000 feet, the grape being of delicious flavour, and the climate exactly suited for both the wine and raisin manufacture. Grapes are also abundant in Kashmir, Kābul, and Bokhara, and afford both raisins and wine. The most celebrated of eastern wines, however, is the Shiraz, prepared in the districts of Khollar, near

the village of Bendamir. There are two varieties, red and white, the former containing 15½, the latter nearly 20 per cent. of alcohol.

The Mosaic law prescribes drink-offerings of a particular measure of wine at the ordaining of priests, and also at harvest festivals and on other occasions of solemnity during the year. In the ancient Greek ritual, not only wine, but other drinks were used, and almost each god and each feast had its appropriate libation of liquids as well as its offering of flowers, fruit, cake, or flesh. Hardly a sacrifice was complete without the use of wine. It was dashed over the brows of the horned victim when immolated, and poured over the cakes which were spread upon the altar. The wine to be used at every meal was first offered in libation to the gods.

Turks.—Timur and his ladies appear to have been confirmed wine-bibbers. Ruy Gonzalez de Clavijo, who visited their court as ambassador from the king of Castille and Leon in 1403, in describing a feast given by Hausada, the wife of the eldest son of Timur, says that when 'the ambassadors arrived, the ladies were drinking, and the way they drink is this: An old knight, a relation of the lord, and two small boys, his relations, serve the cup, before Hausada, and before the other ladies, in this manner: they hold white napkins in their hands, and those who pour out the wine, pour it into small golden cups, which they place on flat plates of gold. Those who serve the wine then come forward, with the pourers-out behind, and when they have got half-way, they touch the ground three times with their right knees. When they come near to the ladies, they take the cups, with their hands wrapped in the white napkins, so that they may not touch the cups, and present them kneeling, to the ladies who are going to drink. . . . You must not think this drinking is of short duration, for it lasts a long time without eating. Cano, the wife of Timur Beg, came to this feast. After the drinking had lasted a long time, Cano called the ambassadors before her, and gave them to drink with her own hand, and she importuned Ruy Gonzalez for a long time, to make him drink, for she would not believe that he never touched wine. The drinking was such that some of the men fell down drunk before her; and this was considered very jovial, for they think that there can be no pleasure without drunken men.' The ambassadors could not withstand the temptation. Neither the Jewish nor the Christian religion prohibited wine or strong drinks.

Muhammadans.—The use of wine is forbidden in the Koran under the word Khamar, which literally means anything intoxicating. Persian shiahs, however, have always been less strict in regard to indulgence in wine. Pietro della Valle mentions two ordinances of Shah Abbas, the one forbidding its use, showing that the religious precept had failed in effect; and the second annulling the prohibition, upon finding that the people, especially the soldiers, had substituted for wine a liquid preparation of opium, by which their health was injured. Wines, by the Persians, are valued for their intoxicating qualities, and not at all for their flavour. Mazanderan, bordering the south of the Caspian, and Khorasan, the eastern continuation of the former province, are the Lesbos and Chios of the subjects of the Shah, but the characteristics and reputation of their produce have become blended in the wine of Shiraz. An old Persian proverb declares that he 'who would live merrily should take his wine from Shiraz, his bread from Yesdecast, and a rosy wife from Yest.'

Shiraz is famed for its vineyards and pomegranate orchards, the former bending under the weight of the largest grape of any Persian vine, although the smaller imperial fruit of Tauris is most juicy and delicate. The principal gardens are situated at the foot of the Zagros mountain, having a fine exposure. 'Apertos Bacchus amat colles.' The vines are grown low, and sometimes trained over stone walls. At Kasvin the growers irrigate their gardens only once a year, about the middle of April, and there is a tradition that the clayey soil thus treated retains sufficient moisture for the season. The vines cultivated in the rising ground of Zagros may be divided into twelve varieties. First there is Kishmish, bearing a beautiful large bunch of white grapes, the berries being oval and without seed. This species serves both for wine-making and the production of raisins. Damas gives a black grape, from which the finest red wine, rich and of great durability, is made. The vines called after Samarcand differ; some yield bunches 12 lbs. in weight. Then there are the Rischbaba, Askeri, and Tauris varieties, supplemented by a vast number of white, green, yellow, violet, red, brown, blue, and black grapes. The juice is fermented in glazed earthenware vases, which are buried in cool cellars. The wine is bottled in glass flasks containing about five imperial pints, and sold by weight. Its taste to a foreigner is at first harsh, but after a few trials there are few who would not appreciate its good qualities. A German connoisseur highly praises the Shiraz produce, comparing it, indeed, to the best growths of Burgundy. Next to Shiraz, Teheran, Yezd, Kasvin, Tabreez, and Isfahan are the most important wine-producing places. They are all situated on the southern slopes of mountain ranges, and thus possess the chief requirement in viticulture. The modern Persian purchases his wine from the Parsee, Jewish, or Armenian growers, who mix it with arrack, saffron, or the extract of hemp.

Wine of a red colour is made by the Siah-posh, who export it in leather skins. The nobles of Kābul each has his own wine-press. The juice is trodden out into a large earthen vessel or masonry reservoir, from which the juice flows through a small hole into a narrow-mouthed earthenware receptacle, and the mouth closed for forty days, when a flagon of fine porous clay is poured in, and the mouth closed air-tight, with a luting of dough, and placed aside to ripen. In Afghanistan and in the British districts on the N.W. of India, the vine grows in wild luxuriance, and in Kashmir wine is made from the grapes of that favoured climate.

A wine called Kishmishi is made in Sind from dried grapes, and that called Anguri is made of the Sind grape at Hyderabad, Sehwan, and Shikarpur. They are sold pure, or strengthened with spirit made from raw sugar.

The *Chinese* in the cold weather drink a fair quantity of wine, but are seldom addicted to drunkenness. Their wines are crude spirituous liquors, almost altogether unrefined, distilled from rice, millet, barley, and other fermented grains,

and the process of distilling seems to have been perfected during the Mongol dynasty. Grape wine was originally brought from certain volcanic districts in Turfan, which has prejudiced the Chinese against it, as they consider it heating. A wine flavoured with sandal-wood, brought from Siam, was formerly in great repute in China. The celebrated Cheh-kiang wine, called Shau-hing-tsiu, is wholesome and in great repute throughout China; it has a yellowish colour and sour flavour. The Yuen-hwa-tsiu is a weak white wine or spirit, flavoured with the flowers of the Passerina chamædaphne, and reputed to be tonic. The Kwei-yuen-tsiu is a red wine. The Pih-luh-tsiu is a greenish coloured wine or spirit, resembling a cordial, made at Peh-chi-li and Hu-peh. The Feu-tsiu is a kind of strong whisky, originally distilled in Fu-chau-fu in Shan-si. The wines of China are taken warm, very soon redden the face, and culminate in evanescent stimulation.

The wines known to Europeans in S.E. Asia are almost exclusively the product of Europe; little of the wines from the Cape of Good Hope, or from Australia, is used. The *palm wines*, the fermented sap of the several species of palms, are very extensively used by all classes of natives, but by Europeans they are untasted.

The wines best known in India are sherries of kinds, clarets, champagne, hock; the Sicilian marsala is scarcely ever seen under that name. The Rhenish wines are often put on the tables of the more wealthy, and the Hungarian, Italian, and Greek wines are rapidly gaining ground. Port or Lisbon are very rarely seen, and the famed wine of Shiraz or Kerzerum is wholly unknown, though Ahmad of Andabul sang,—

> 'Bring the bowl and pass it round,
> Lightly tune the sportive lay;
> Let the festal hour be crown'd,
> Ere 'tis lost like yesterday.'

WINI. SANSK. Winaya, BURM. The Burmese book which regulates the life and conversation of the Buddhist monks.

WINNOWING. Matthew iii. 12 says, 'Whose fan is in his hand.' The common winnowing fan of the Hindus is square, made of split bamboos, and the corn is winnowed by waving the fan backwards and forwards with both hands.—*Yule*, p. 169.

WIRD. ARAB. Repeating perpetually something out of the Koran; a supplication or blessing.

WIRGEL-COIL, a celebrated temple in Ceylon. It was plundered in 1839 by moormen (Muhammadans) from Batticaloa of jewellery to the amount of Rs. 6000.

WISTARIA SINENSIS, *D.C.*, Glycine Sinensis, *Sims.*, is a twining plant, one of the Fabaceæ and of the section Phaseoleæ. In China, Mr. Fortune saw one which had all the appearance of a tree in miniature. Every one of the branches was loaded with long racemes of pendulous lilac blossoms. At another place he saw a Wistaria evidently of great age. It measured, at 8 feet from the ground, 7 feet in circumference, and covered a space of trellis-work 60 feet by 102 feet. Thousands of long racemes hung down nearly half-way to the ground.—*Fortune, Japan and China.*

WITCHCRAFT is believed in by all the races of the south and east of Asia. It still lingers even in civilised Britain. Amongst the Musalman we find the first distinct expression of the religious condemnation of all magic as a sin, because it is treason against God. But sorcery of all kinds is known and incessantly practised. Much business is done in amulets, charms, spells, exorcism, magic mirrors, cabalistic figures, divination, sortilege, and the like. But all such proceedings and devices are opposed to the true spirit of Islam, and are condemned by Musalman divines. For the admission of other supernatural beings into any kind of partnership with God, in the exercise of miraculous powers, which are his attributes, or the performance of wonders without calling on God's name or ascribing the glory to him, are matters upon which Muhammadanism looks with a very unfavourable eye. The Banjara race are confirmed believers in witchcraft. In one of their Berar encampments near Khamgaum, a headman had lost some of his cattle by death in a most mysterious manner. He came to the conclusion that there was a witch in the encampment, and resorted to the priest for advice, and agreed to give him 60 rupees. The priest performed a number of mummeries, and then pointed out an old woman as the person who had caused all the destruction to the cattle. The woman was a wife of another headman, was seventy years of age, and was the mother of ten children. When the husband of the woman was informed of the revelations of the priest, he told his wife of the same, and although she protested most earnestly against what was said, she was not believed, and the husband and two of his sons led her to a lonely place in the jungle, and strangled her with a rope. The two sons then dug a grave and buried the poor woman. The father and his sons were condemned to death.

So late as the year 1863, an old man of 80 was swung for a wizard in the hill stream at Little Hedingham, in Essex, and died from it. In the wild tract in the extreme south-west of Udaipur, in 1871, the headman (Gounthee) of a Bhil village was taken ill, and one Lemba Bhaguri, a bhopa or witch-finder, was employed to discover the witch who had caused his sickness. That man's account of what happened, given before the Political Assistant at Kotra, was as follows:—'Dhuna Doongri took a handful of grain, and, having waved it over the body of the Gounthee Sukra, asked me to look at the grain. I looked at it, but I never spoke or said a word, nor did I show that any one was a witch. I remained perfectly silent. On this, Champa, Knolo, and the four sons of Sukra said to me, "Why are you silent and do not speak? We have already arranged everything: Deeta, Loi's wife, is the witch, and she has made the Gounthee ill; let us go and put her to the test." On this every one rose, went and seized Deeta, and took her to the water and put her to the water test (which is the following:—A bamboo is embedded at the bottom of any piece of water. The accused goes to the bamboo, holds it and by it descends to the bottom. In the meantime one of the villagers discharges an arrow from his bow, and another villager runs to pick it up and bring it back to the place it was launched from. If the unfortunate woman is able to remain under water until this is done, she is declared innocent, but if she comes up to breathe before the arrow is returned to the bowman, she is a true witch, and must be swung as such). The bow-

man was Kumla Kasota, his father's name Nurhingh, of village Khara. The fetchers of the arrow were two of Sukra's sons, Kumla and Joyta. I was also present at the time of test. The woman failed in the test, and thus became a witch. At this a great outcry was raised, and the woman was seized and tied up and taken away. I returned to my home.' Other evidence, however, showed that, after looking at the grain, Lemba had declared Deeta the witch. What happened then may best be told in Deeta's own words:—'Seven Bhils of Jhanjur and Kumla of another village came to my house and told me I was a witch, and that I had made Sukra Gounthee ill. They seized me, saying, "Come and undergo an ordeal." I agreed, and went with them. They put me to the test of taking out a rupee from heated oil. I twice took out the rupee from the burning oil without injury to myself, and was innocent. They allowed me to go home. At the time of undergoing the ordeal, my husband Deeta Loi and his elder brother Lalla were present on my part. A month after this the above-named seven Bhils again came to my house, seized me, and said they would put me to the water test. They took me to the river and told me to perform the test. I refused, and did not enter the water; they then took me to a tamarind tree behind Sukra's house, and applied a bandage of red chillies over my eyes, tied me to a rope head downwards from the tree, and began to swing me backwards and forwards. They swung me for two whole days; the third day they swung me till 12 o'clock A.M. They, thinking me then dead, undid the ropes, and left me there. Budda Paigee, who belongs to my father's village, and whom I call brother, took me to his house and attended to my wounds and my inanimate state. Having a little life in me, I recovered.' The rope, it appeared, had been tied round her ankles. During the swinging the Bhils kept on shouting and urging her to confess. They used to take her down at night, but not to untie the rope, and they gave her food. Two of the neighbouring Thakurs tried to stop the swinging, but the Bhils would not obey; but at last a period was put to further torture, either by the influence of the Mewar Vakil, or by the impression that its victim was already dead. The Political Assistant sentenced Lemba to five years' imprisonment in the Ajmir jail. The punishment of the villagers who swung the woman had been committed by the Durbar to a neighbouring chieftain, and he executed it in such a barbarous manner as to call for severe animadversion on the part of the British political officers.

In 1872, in the Bhil country, a Baniya of Kushulgarh, by name Fatta, was very ill, and he and his family fancied he was bewitched. The Baniya himself believed that his liver was being devoured by the woman Chundoo, described to be 70 to 80 years of age, whose cattle he had previously taken in satisfaction of a debt. He consequently summoned, from a neighbouring village, the witch-finder Vosta, who performed the usual incantations called Kajlee, and confirmed the Baniya's suspicions; and Badria Tarri, one of the Bhils present, recommended that Chundoo should be swung. Chundoo was sent for, taken to the kotwali, and confined there. After an interval of a few days, some Bhils were summoned, and paid to swing Chundoo as a witch at a little distance outside the city. The poor woman was taken to a banyan tree and swung from her wrists, her eyes, as is customary on such occasions, being bandaged with red chillies. The swinging was carried out under the direction of Ali Kotwal, the bhopa being also present on each day to obtain the witch's confession. She refused to confess or exorcise the Baniya, whom she upbraided for having taken her cattle. After swinging for four days, the unfortunate creature died, and orders were given to the Bhils to bury her. The swinging of alleged witches was of common occurrence in the Bhil tracts before the Mewar Bhil corps was raised at Khairwara, but rarely happens now-a-days. The belief in witches is widespread. Juvini tells us that from time immemorial women had been addicted to witchcraft in Turkestan and Transoxiana; witches were called in to sick people, and practised spells and incantations by which they pretended to drive away diseases. —*P. Arminius Vambery, Bokhara*, p. 143; *Pioneer.*

WITHANIA COAGULANS. *Dun.*

Panir,	HIND., PANJ.	Spin bajja,	TR.-IND.
Khainjaria,	RAVI.	Khumazare,	,,
Kulilana,	,,	Makhazura,	,,

This plant grows in the southern parts of the Panjab near houses or fields, seldom in the desert. The Afghans use it for coagulating milk; its seeds in colic, and its bitter leaves as a febrifuge. It is also a veterinary medicine.—*Honig.; Stewart; Powell.*

WITHANIA SOMNIFERA.

Asgand nagori,	HIND.	Ashwa-gandha,	HIND.
Isgand,	,,	Lal kuti,	PANJ.

Its long white root is used as a diuretic and a deobstruent; its leaves, bitter and narcotic, useful in special diseases and in swellings, and externally in carbuncle; it is said also to improve the complexion.—*Powell.*

WITTOBA or Vithoba, one of the many subordinate incarnations of Vishnu. It took place at Panderpur, a town about eighty miles to the south-east of Poona. The Brahmans speak of it as an event of not very ancient date, but say that it is recorded, perhaps prophetically, in the Bhagavata. A splendid temple is there dedicated to his worship. He is represented sculptured in stone, of the size of a man, standing with his feet parallel to each other, with his hands upon his lips, the fingers pointing forwards; he is covered with a sort of raised hat, crowned with a linga; his hair is plaited, and turned up. Wittoba is also worshipped at Alundi, but his principal shrine is at Panderpur, on the Bhima, to the westward of Sholapur. Wittoba is a god of very questionable orthodoxy, but he is very popular among the Mahrattas. The same is the case with Kandoba, who is yet more popular among the lower orders of Mahrattas, and, if possible, less orthodox; they are probably the ancient deities of the Mahratta race.

WOAD, a dye yielded by Isatis tinctoria, *L.*, said to have been used by the ancient Britons, prior to the Roman conquest, to stain their skin a blue colour.

WODALA, a seafaring race on the coasts of Gujerat and Cutch.

WODEN, supposed to be the Buddha of Hindustan. The name came from the east to Europe just when active missionaries were spreading

Buddhism on all sides; and the fourth day of the week is Wednesday in the west, and Budhbar in the east. Beyond these names, however, there is no similarity between the gentle ascetic Sakya Muni, to whom this appellation is given in Buddhist countries, and the fierce warrior who came to Europe.

WOFTANGIL. KASH. A grass of Kashmir, from which is prepared a yellow dye for shawl-wool.

WOLAR, a lake near Srinuggur in Kashmir.

WOLF.

Canis lupus, *Linn.*	C. palipes, *Sykes.*
Deeb, ... ARAB.	Bherija, Landga, . HIND.
Tola, ... CAN.	Lupo, Lupa, . . . IT.
Vulf, ... GER.	Lupus, ... LAT.
Lukos, ... GR.	Vrika, ... SANSK.
Zeeb, ... HEB.	Lobo, Loba, Lupia, . SP.

The wolf roams over British India, never singly, but always in large or small packs. If a single one appear, it may be assumed that others of the pack are near. They are bold even in the vicinity of towns, scarcely moving off from horsemen; and in Central India, Oudh, and the Panjab, they destroy large numbers of children, and even full-grown men and women. In this case two wolves would attack, one stealing up behind and seizing the victim by the neck, while the other, coming swiftly up, tears out the entrails in front. In the seven years 1875 to 1881, 4452 persons were destroyed by wolves in India. Their ordinary prey are deer and sheep, and in pursuit they display great sagacity, throwing out flanking parties on surrounding the game. Recently a sambur deer was seen to run close up to a railway train in Berar, but halted as the train moved on; looking beyond, a body of wolves were observed in its pursuit.

Wolves are numerous in the neighbourhood of Sultanpur, and, indeed, all along the banks of the Gumti river, among the ravines that intersect them; and a great many children are carried off by them from towns, villages, and camps. Hardly any of the Hindu population, save those of the very lowest class, who live a vagrant life, and bivouac in the jungles or in the suburbs of towns and villages, will attempt to catch or kill them. All other Hindus have a superstitious dread of destroying or even injuring them; on whose hand a drop of wolf's blood has fallen, believes himself doomed to destruction. The class of little vagrant communities above mentioned, who have no superstitious dread of destroying any living thing, eat jackals and all kinds of reptiles, and catch all kinds of animals, either to feed upon themselves, or to sell them to those who wish to keep or hunt them. Wolf-boy; Colonel Sleeman mentions instances of children brought up by wolves. —*Rajasthan*, i. p. 466; *Sleeman's Journey*, p. 206.

WOLFF, REVEREND JOSEPH, a native of Germany, a Jew convert to Christianity, domiciled in England, who travelled as a missionary to the Jews through Central Asia, to Kábul, to Jedda, and to Bokhara; in 1844 he made a noble effort to release Colonel Stoddart and Capt. Conolly.

WOMAN.

Amraah, ... ARAB.	Aurat, ... HIND.
Vifmann, . ANGLO-SAX.	Donna, ... IT.
Wimann, . „	Mulier, ... LAT.
Wimman, Wemann, „	Zan, ... PERS.
Femme, ... FR.	Muger, ... SP.
Frau, Weib, . . . GER.	Pénli, . . TAM., TEL.
Ishsha, ... HEB.	

The respective numbers of men and women in the world are usually accepted as being about equal, but in the 1881 census of British India the women of that country are 5,991,881 fewer than the men, the respective numbers being 129,941,851 males and 123,949,970 females; and it has shown also that the proportion varies greatly in the several provinces, and that in Bengal, Madras, Mysore, and Travancore, the women preponderate—

	Males.	Females.		Males.	Females.
Bengal,	34,625,591	34,911,270	Mysore, .	2,085,842	2,100,346
Madras,	15,421,043	15,749,588	Travancore,	1,197,184	1,204,024

This difference in the relative proportion of the sexes has been receiving the attention of the British Government during all the 19th century, and the surmise has been that it has resulted from neglect and murder of the infant girls, as all classes throughout Asia value male children, and some of the races are known to have been guilty of female infanticide. It was practised amongst the Arab tribes until forbidden by Mahomed. Several of the clans of Rajputs and Jat of India have notoriously destroyed their infant girls, and with the Chinese poor the new-born girls are not unfrequently deprived of life. Since the early years of the 19th century, the British in India have been endeavouring to suppress this crime, and in several of the suspected localities the numbers of women and girls have been increasing, but in the Census Report of 1881 an opinion has been suggested that amongst some of the Rajput clans more male than female children are born.

In the vast regions of Southern and Eastern Asia, the personal appearance, apparel, mental characteristics, and social position of women are as varied as the tribes and races of which they form a part. In the Sareda Tilaka, in a monologue of later date than the play of Mrichchakati (which was of the 1st century of the Christian era, but still of comparative antiquity), there is a description of various women of India. 'There goes the maid of Gurjara (Gujerat), blooming as with perpetual youth, having eyes like the chakora, of the complexion of the yellow rochana, and a voice musical as that of the parrot. She wears anklets of silver, large ear-rings set with pearls, and her bodice is buttoned below the hips with gems. The matron of Maharashtra proceeds yonder, her forehead stained with saffron, and with silver chains upon her feet; she wears a coloured veil, and a girdle round her loins. A Chola female (south of India) approaches, whose cheeks are tinted with saffron, and whose dress is embroidered with the buds of the lotus.'

In the south-west of Asia the Circassian and Georgian girls, and in British India the Rajputni, are the more famed for their personal appearance. The Circassian girls are not strikingly handsome, but they are well formed, and very clever and intelligent. This makes them engaging, attractive, gracious, and affable, and they soon acquire influence in a Turkish family. Georgian women are handsome, but much inferior to the Circassian in mental qualities.

At the present day, in countries where Muhammadan manners prevail, and now including India, the women in the streets have a much meaner appearance than the men, because women of the better class are so little abroad. Their more

common costume are bodice and gown, or cloth worn in the form of a gown. Some of the Muhammadan women have trousers; and the women of all the races make a display of jewellery, often, as with the Marwari women, consisting of weighty anklets or bracelets, or, as with the Binjara women, of deer-horn rings covering the forearm, and most of the races have rings for the fingers, toes, ears, and nose. The ta-mein wrapper of the Burmese women is so narrow that the left limb is exposed at every step. The Teyati women of Travancore and Malabar, and the Namburi women in their households, have no covering above the waist. Until 1871, the Juanga women of the Northern Circars had two bunches of leaves as their sole attire.

The Miri women on the N.E. frontier wear a small petticoat woven of filaments of cane, about a foot in breadth, and tight round the loins. The Abor women, also on the N.E. frontier, have often no other covering than three to twelve shell-shaped embossed plates of bell-metal suspended from a string round their loins; and lastly, the Mincopi men and women of the Andamans are nude.

In social life, the women of the Muhammadans are strictly secluded. In this respect the Asiatic races have had different customs from the most ancient times. Woman with the Accadians was deemed the equal if not the superior of the man. We learn from the book of Esther that amongst the early Persians ladies were even admitted to banquets and received strangers in their own apartments, whilst they resided habitually in houses separate from the dwellings of the men. Amongst the Hindus of the ancient Vedic times, the women seem to have freely moved about. The rishi and his wife are described as conversing on equal terms; go together to the sacrifice, and practise austerities together. Lovely maidens go in a procession, and grown-up daughters remain without reproach in their father's house. In the Mudra Rakshasa, a Sanskrit drama, Chandragupta asks, 'Why are not all the citizens with their wives abroad and merry-making?' There must also, however, have been other habits in those days, and notices occur indicative of the seclusion of their women. Panini uses the term Asuryam Pasya, one who never sees the sun, as an epithet for a king's wife. In the Ramayana occurs the word Avarodha, fenced or guarded place; it is used for the women's apartments. And Rama says to Vibhishana, that in great calamities, or on the occasion of marriages, at the public choice of a husband by maidens, it is allowable for all the world to look upon women. The king, when within the palace, used to be attended by women, his guards, and other troops. Strabo says, 'Regis corpus mulieres curant, ea quoque de parentibus emptæ, qui regem custodient, et reliquis exercitus manent extra portas' (iv. 15, p. 228); and at the present day, in Hyderabad in the Dekhan, noble families still retain armed women as guards of their households, while nearly all the women of the Aryan and non-Aryan Hindus, and all those of the Mongoloid races of Further India, have their share of all the outdoor work of their establishments, and of all the amusements and sight-seeing. In Buddhist Burma, all the young move about unrestrainedly, dressed in their gayest and best, and their women engage largely in trade, and this is applicable to the customs of the Siamese, Chinese, and Japanese.

In Burmese Buddhism there is no difference between man and man but that which is established by superiority of virtue, and hence it is that the state of woman among Buddhists is so very much higher than it is among oriental peoples who do not hold by that faith. Nevertheless, in India, among the Mer and Rabari, the wife is the head of the house, pays all accounts, and transacts business. The seclusion of the women practised by the Muhammadans is part of their religious law; it is laid down in the Koran that they are only to be seen by the nearest relatives, by children, or by eunuchs, and the custom has to some extent been copied by the wealthier Rajputs and other Hindu races. In Southern India, the female attendants of the Muhammadan ladies are designated Moghulani.

Many Hindu and Muhammadan women have taken a part in the political life of India. At the present day the Begum of Bhopal is following in the footsteps of her mother, and is ruling her territory with justice and success. Their ancient Sanskrit dramas relate how Draupadi being insulted led to the war of the Yadava and Pandava; how Sita, being carried off by Ravana, led Rama to invade the Peninsula; how Nala in his love for Damayanti became an exile; how Raja Bharti in losing Pingala left the throne of Avanti. These may be only tales; but in historic times, A.D. 1175, the rape by Prithi-raj of the princess Sanjagata, the daughter of the king of Kanouj, led to the destruction of the Hindu rule; and in the present century, Kishen Koour, a daughter of the Maharana of Udaipur, was celebrated for her beauty. The rajas of Jeypore and Jodhpur both demanded her hand in marriage, and for some years Rajputana was the prey of foreign invasion and civil war. To restore peace, her parents, in 1809, were obliged to consent that poison should be administered to her, which the victim, for the sake of her country, unhesitatingly drank. The sacrifice, however, brought no peace to Rajputana. An easy cynicism has furnished even a recent Hindu writer with derogatory thoughts of women, and the three most prolific sources of litigation are said to be chattels, women, and lands. A native couplet to this effect runs,—

'Zan, Zamin, Zar,
Tinon kazyah ka ghar.'

But modern Hindus consider that the good fortune of a husband depends on that of the wife; hence a woman is considered as an emblem of Lucki or Lakshmi, the goddess of fortune, and Hindu poets almost invariably represent women as amiable and affectionate. In this they might have given a lesson to the bards of more lofty nations, and particularly to the Greeks, who both in tragedy and comedy pursued the fair sex with implacable rancour. Aristophanes is not a whit behind Euripides, although he ridicules the tragedian for his ungallant propensities.

In the Sanskrit drama, the passion of Malati is equally intense with that of Juliet; but her unconquerable reserve, even to the extent of denying her utterance to him she loves more than life, is a curious picture of the restraint to which the manners of Hindu women were subjected, even whilst they were in enjoyment, as appears from the drama, of considerable personal freedom.

A Sanskrit drama says,—

'A woman's bliss is found, not in the smile
Of father, mother, friend, nor in herself;
Her husband is her only portion here,
Her heaven hereafter. If thou indeed
Depart this day into the forest drear,
I will precede, and smooth the thorny way.
A gay recluse,
On thee attending, happy shall I feel
Within the honey-scented grove to roam,
For thou e'en here canst nourish and protect;
And therefore other friend I cannot need.
To-day most surely with thee will I go,
And thus resolved, I must not be deny'd;
Roots and wild fruit shall be my constant food.'

Another author makes a loving woman say to her husband,—

'But without thee e'en heaven would lose its charms.'

'Pleased to embrace thy feet, I will reside
In the rough forest as my father's house.
Void of all other wish, supremely thine,
Permit me this respect,—I will not grieve,
I will not burden thee,—refuse me not.
But shouldst thou, Raghuvu, this prayer deny,
Know, I resolve on death.'

The Uttara-Rama-Charita, the Vikrama and Urvasi, and the Mudra Rakshasa, contain many illustrations of the Hindu woman's love and affection. In the latter piece occurs an example, in comparatively humble life, of the strong affection of a Hindu wife. Chandana Das, like Antonio in the Merchant of Venice, is doomed to die to save his friend. His wife follows him to the scene of execution, with their only child, and the succeeding dialogue ensues,—

'*Chand.* Withdraw, my love, and lead our boy along.
Wife. Forgive me, husband,—to another world
Thy steps are bound, and not to foreign realms
Whence in due time thou homeward wilt return;
No common farewell our leave-taking now
Admits, nor must the partner of thy fate
Leave thee to trace thy solitary way.
Chand. What dost thou mean?
Wife. To follow thee in death.
Chand. Think not of this,—our boy's yet tender years
Demand affectionate and guardian care.
Wife. I leave him to our household gods, nor fear
They will desert his youth; Come, my dear boy,
And bid thy sire a long and last farewell.
Thus could I sweetly pass a thousand years.'

Woman has ever been held in higher honour amongst the Teutonic nations than amongst those of the south of Europe or of the east, and has contributed, by the elevating influence she was permitted to enjoy, to their moral exaltation and martial superiority. Tales of the Hindus turn upon the wickedness of women, the luxury, profligacy, treachery, and craft of the female sex. The Pancha-tantra contains many stories of the objectionable character now mentioned, and these have been repeated in all the literature emanating from that ancient book; but the Hindu woman's attachment to her parents, her brothers and sisters, her husband and her children, is characterized by all the devotion and unselfishness of woman's love. As manager and mistress of a household, she exhibits an energy and concentration not always to be found amongst the more favoured mothers of the west.

The doctrines of the Hindu religion have been singularly careful to protect the female sex and infants from violence, and it has been declared unlawful to put a woman to death for any offence whatever. A Sanskrit sloka runs,—

Shut gao wudhe vepra,
Shut vepra wudhe istreea;
Shut istreea wudhea bala,
Shut bala wudhe muresha.'

'To kill one Brahman is equal to one hundred cows; to kill one woman is equal to one hundred Brahmans; to kill one child is equal to one hundred women; to kill one hundred children is an offence too heinous for comparison.'

Tacitus tells us that the Germans deemed the advice of a woman in periods of exigence oracular. So does the Rajput, as the bard Chund often exemplifies, and hence they append to her name the epithet Devi (or, contracted, De), godlike. But notwithstanding the prevalence of this feeling amongst Rajputs, with this once martial race, from ancient times, leading the females captive appears to have been the sign of complete victory. Rajput inscriptions often allude to a conqueror beloved by the wives of his conquered foe, and in the early parts of Hebrew Scripture the same notion is referred to. The mother of Sisera (Judges ver. 31) asks, 'Have they not divided the prey; to every man a damsel or two?' To a German mind, says Tacitus, the idea of a woman led into captivity was insupportable, and to prevent this the Rajput performed the johura sacrifice, when every sachæ (branch) is cut.

Muhammad Kasim, nephew of Hejaj, governor of Basra, was sent with a force to take Sind, then under Dahir (about A.D. 711, A.H. 92). He took Dewal, defeated and took prisoner a son of Dahir, advanced on Nerun (the modern Hyderabad), and took Sehwan. He subsequently advanced on Alor, where he encountered Dahir, who was defeated and slain. His widow defended the city, but ultimately the women devoted themselves to the flames, which they lighted themselves. The Rajput garrison battled for the sacrifice of themselves, and perished fighting. The city was taken by assault. All the men in arms were slaughtered in the storm, and the women and children reduced to bondage.

Many of the Thugs attributed the discovery of their system by the British to some of their parties having occasionally murdered women; and with the predatory Mang race of the Dekhan the persons of women have been religiously respected in their dacoity expeditions, no violence being ever offered to them under any circumstances. On no occasion will the Mang lay hands on the sex, nor will they despoil them of such of their wearing apparel as may be on their persons, threats being mainly the means employed to induce them to give up the property in their possession.

Marriage.—Aryan and Turanian races, in the selection of their wives, follow very different customs. The one is exogamic, taking wives from other tribes than their own; and the other endogamic, taking them from their own tribes. The Warali tribes are divided into sections, and no man may marry a woman belonging to his own section. In the Magar tribes a section is called a thum, and the same rule prevails. The Ho, Munda, and Oraon are divided into clans or keli, and may not take to wife a girl of the same keli. Again, the Garrows are divided into mahari, and a man may not marry a girl of his own mahari. With Muhammadans, the selection is not restricted; but in India, amongst Muhammadans of Arab descent, a young man can claim to marry his

mother's brother's daughter as his right. Amongst the Kol of Central India the marriage by capture still continues, as amongst some of the Turkoman races and amongst some Mongoloid races in the Malay Peninsula; and young men amongst the Gond race occasionally serve for a wife.

The marriage customs of the races under notice, their polyandric, polygamic, and sati suicidal customs, will be found described under these headings; but it may be mentioned here that amongst the Semitic races the position of their women has varied. The Hebrew Scriptures show progress in the Jewish views as to women. At the outset, the right of woman to choose her lot seems to have been wholly disregarded. Abraham twice permitted Pharaoh to have Sarah, Judah condemned his daughter-in-law to be burned, and God is described as having threatened to give David's wives to his neighbour or to his son; Michal was transferred to Phaltiel from David by Saul, who had quarrelled with David, and kings habitually succeeded to their predecessor's wives. Sir William Muir says (Annals of the Early Caliphate, i. p. 271) that under the old chivalrous code of the Arabs, the wife of noble blood held a position of honour and supremacy in the household, from which she could not be ousted by any base-born rival, however fair or fruitful. But in the victorious wars waged in Umar's time, the baneful influence of polygamy was quickened by the vast multitudes of slave girls taken by the army and distributed or sold both among the soldiers and the community at large, and it was intensified by the husband's power of arbitrary divorce, and the unlimited licence of servile concubinage. The noble wife's position fell to be one among many, and if the slave girl bore the husband children she and the children became at once free.

Amongst some of the Mongoloid races whose daughters grow up unmarried, a courting, as is customary in Britain and its colonies, is common; but as most of the marriages take place while girls are of tender years, or where, as with the Muhammadan and the Kayasth races, the women are gosha, or secluded, and courting is inapplicable or impossible, the betrothal arrangements are made by the parents direct, or by means of agents called dilalah. The daughters of non-Aryan races are married later in life. Amongst the Burmese, courting is a loving custom, and the early hours of the night are designated courting time.

With several of the races their women when married are disfigured. Muhammadan wives of the south of India have their teeth blackened with missi, a vitriolic dentifrice made from gall-nuts, myrobalans, pods or gum of the keckur tree, a species of Acacia leucophlæa, sulphate of copper, and steel filings. Similarly, the women in Japan have their teeth blackened and their eyebrows shaved. The Khyen or Kayn or Chin, of the Yoma mountains and the Prome district of Burma, tattoo the faces of their women in a manner which gives them a most demoniacal appearance, but under British rule the practice is being discontinued. Their women are handsome, and many of them were captured for the kings, and the practice was originated to prevent this. In the large towns of China and Japan, concubinage seems to prevail to a greater extent than it is met with in the western countries of Southern Asia. In Japan, the practice, so soon as a woman is married, of staining her teeth black, and thus destroying one of woman's greatest ornaments, can only have the effect of making the wife less attractive to the husband, and forcing his affections elsewhere. And in the concubinage of China there is not found among the young women whom they select, any of the deformed feet which the richer classes of the people create for the girls who are to be the wives of their households.

The Burmese and some of the races of the Eastern Archipelago are not greatly restricted before marriage. The Nair women, and women in Malabar of the races following the law of descent in the female line, are their own mistresses. The Comanches, Aleutians, Eskimo, and Kamtschadales cede their wives to their guests, and the wives of the Hassaniyeh Arabs of Nubia have the free disposal of themselves every fourth day.

Occupation.—The wives of the Muhammadan, the Kayasth, and the Rajput afford no outdoor aid to their husbands; but the Kunbi and Kurmi women, the Jat women, the Vellalar, Reddi, Kapalu, and Okla, the shepherd dhangar and kurumbar women, and the women of nearly all the Mongoloid, Turanian, or non-Aryan races, engage in outdoor work along with their husbands; and with some of the Mongoloid races in the N.W. and N.E. borders of British India, the field labour is almost entirely carried on by the women.

Education.—In British India, since the middle of the 19th century, Dr. John Wilson of Bombay, followed by other Europeans, and by a few Hindus and Muhammadans, has been trying to educate Hindu, Parsee, and Muhammadan women.

There have always been Hindwani and Musalmani who have been educated, but writing is not looked upon with favour. There is a Tamil proverb that 'ignorance is the chief ornament of women' ('Ariyamei mätharukku äbaranam'). Even Auvaiyar, the most popular Tamil poetess, echoes this saying ('Pethumei enbathu mätharku anikalam'). Hindus of all classes acquiesce in the statement enshrined in this barbarous verse. And it is curious to find that Pan-houi-pan, celebrated among Chinese writers, though a woman, endeavours in her works to humiliate her own sex by reminding them continually of the inferior rank they occupy in creation. The position of a Chinese woman is certainly very abject.

At the present day the Deva-dasa attached to the Hindu temples are almost the only educated Hindu women. A Hindu describing them says,—'The women of the Brahmans are very beautiful, but their total want of education or accomplishment makes dancing women sought after by all Hindus. They can sing, they can read; from their childhood they have been trained in the arts that captivate. Their black eyes know how to flash or languish; their feet have been taught what, to a Hindu, appears the poetry of motion. Many of them can play on instruments of music. They know the arts of painting the eyebrow, and of winding the gauzy robe elegantly round their slim persons. They are the only women in India who are familiar and easy in the company of men.'

The male population has been to a great extent educated, and the men have learned to admire that education in the temple women which cannot be found in their own wives. Hindu domestic life is thus a farce. A young Hindu enters life on his

own account. A few months have passed since the flowers were showered and the horns blown to celebrate his wedding. His eyes are now gradually opened to the fact that his young bride is an insipid child. She cannot read a line from the Ramayana to cheer him in a weary hour. Her stock of conversational powers is small; she cannot make herself half so pleasant as a girl with large anklets, who nods and laughs to him whenever he passes by the temple. His ideas of purity and the sacredness of the marriage tie are very misty. How many of his rich neighbours have several wives! How many of them have the temple Dasi! So, without a qualm of conscience, he slips away from the right path. He goes home to eat, and goes to the temple for recreation, not ashamed to be the avowed admirer of the Aspasias and Phrynes, from the same cause which attracted Socrates and made Pericles a slave, and which will continue until the united charms of the dance and the song are sanctioned to be practised in the Hindu homes. To improve the morality of Hindus, educate Hindu women. Education aiding immorality is the bane; education assisting morality must be the antidote. One of the greatest questions which can occupy the minds of the friends of India is, How can her women be reached, and their intellectual, moral, and religious condition be improved?

The Muhammadans also have bands of singing women, whose lives are similar to the Deva-dasa of the Hindu temples. It is said that Phryne offered to rebuild Thebes at her own expense, provided an inscription was placed on the walls, 'Alexander diruit sed meretrix Phryne refecit,' which was not allowed. Similarly, at the close of the 18th century, Chand, a famed cantatrice of Hyderabad, built a mosque, and asked a learned man for a couplet that would indicate the date, and he wrote, 'Pesh-i-īn mihrāb, sajūd-i-khas-o-ām ast, Falk gūft īn bait-ūl-harām ast,' which was not accepted.

In *Buddhist* countries women are more nearly the companions of the men, and the Tibeto-Burmans and cognate Indonesian tribes permit great licence to both sexes prior to marriage. In Burma, marriages are contracted after puberty. Their young people seem happy and contented, and women conduct much of their market and commercial transactions, yet their ambition is not satisfied. Wherever the Buddhist philosophy has spread the doctrine of metempsychosis, women hope that in their future changes they may be born as men; and Burmese and Chinese women frequently pray that their soul may, as a reward for virtue, on entering the world a second time inhabit the body of a man.

Reverence of Husband, etc.—At daybreak, the Hindu wife rises, tidies up the house, and then touches her husband's feet to awaken him. After bathing and worship and preparing the food,—and a Vaishnava woman does not allow any one but her husband to see her cooking,—she presents food to her husband, and in so doing turns around him (circumambulates), and prostrates herself before him. This practice of the wife worshipping the husband is very ancient. In the Sanskrit drama styled Ratna Vali, or The Necklace, Vasava-datta, after worshipping the image of the deity, her attendant says,—'The worship of the divinity concluded, be pleased, madame, to pay adoration to your lord.' Vasava—'Where are the flowers and unguent?' Kanch—'Here, madame.' On which Vasava-datta worships the king. This is conformable to the Bhavishyottara Purana, which directs: 'Having offered adoration to the mind-born divinity, let the wife worship her husband with ornaments, flowers, and raiment. Thinking internally with entire complacency, this is the god of love.' All Hindu women worship or reverence the cow, the tulsi plant (Ocimum basilicum), the lights of the lamps, and the gate or door entrance, of which the goddess Lakshmi is the guardian; and with Vaishnava women of the south of India, every Friday evening at lamp-lighting time, the house and utensils are cleaned, and the household god worshipped.

Names.—Women's names in China are taken from gems, flowers, personal appearance, or virtues. The names of Hindu women are usually those of their goddesses, with the adjunct Ma or Amma, meaning mother, or Bai, meaning lady. The names of plants are not unusually given, as Tulsi or Tulsi bai; and those of goddesses, as Durgamma, Lakshmi bai.

Muhammadan women of rank in the south of India have Nissa, Begum, Bi, Khatun, and Khanum as concluding, and their names or parts of their names usually represent some quality or condition, as Rahim-un-Nissa Begum. Of these, Nissa is the highest in dignity, Khatun is that added to the names of the Pathan women, as Rahmat Khatun; Bi to names of the Syudani and Shaikh women; and Khanum to the women of the Moghul race. The female servants have names indicating some personal peculiarity, or the mode of their acquisition, as Gūl-Andām, rose-bodied; Nargas or narcissus, etc.

In Hindu life a married woman is not allowed to utter the name of her husband, or of any of his relatives, male or female, except those who are younger than herself.

Suicide.—For a Muhammadan woman to destroy herself on the demise of her husband is an unheard-of thing, but with Hindu women it was frequent until the early years of the 19th century, and Chinese women continue it to the present day. See Suttee. About 1880, a daughter of the late Chinese Minister to London, Kwo Sungtaon, recently afforded an example of what a Chinese wife should be and do. According to the Pekin Gazette, at the age of seventeen she became the wife of the brother of Tso Tsung-tang, the conqueror of Kuldja. Not long afterwards her husband fell ill, and when ordinary nourishing food failed to revive him, she sliced a piece from her arm and mixed it with his broth. But her husband died. This event only opened a new field for the exercise of saintly duty. So to poison herself she refused to swallow anything but gold-leaf, with no result; and her friends besought her to throw away the poison. She consented, but took advantage of the first illness which overtook her to starve herself to death.

Many of the Buddhist women of Tibet become nuns; in China, also, among the Buddhists there are nunneries, and there is a Hindu sect in the Bombay Presidency with nuns. But amongst Muhammadan women such a condition is extremely rare. Zinat-u-Nissa, the spinster daughter of Aurangzeb, died unmarried. In the History of Ahmadnaggur, by Shahab-ud-Din, she is stated

to have loved raja Sahu, her father's prisoner. She is buried near Aurangabad. After the conditions affecting the young and the married, it remains to notice those of the widows,—

Rajat, Aem, Rabz, ARAB.	Vidova, . OLD PRUSSIAN.
Rabzat, Tor, . . ,,	Widowa, ,,
Feadbh, ... CELT.	Vi-dhava, . . . SANSK.
Bewa, Rand, . . HIND.	Viduwvo, . . SLAVONIC.
Vedova, ... IT.	Kumbinjatheo, . TAM.
Vidua, . . . LAT., SP.	

The widows of the various races of South-Eastern Asia are treated very variously. Amongst the polyandrist Nair race such a state as widowhood is an impossibility. With several of the Jat and Gujar clans, when a brother dies and leaves a widow, a younger brother marries her. Muhammadan law permits re-marriage of widows, and in Arabia, Persia, and Egypt such is common; but in British India Muhammadan widows rarely re-marry. Amongst the Jews of old the widow was allowed to re-marry; and amongst the Hindus re-marriage of widows is permitted by their great lawgiver Menu, but in practice it is rare, although legalized in 1856 by an Act of the Indian Government. Amongst a few of the non-Aryan races a widow is re-married by the pát ceremonial, and if a Muhammadan woman marry it is by the nikkah form. The painfulness of the widowed state is alluded to in Lamentations i. 1, 'How is she become as a widow!' and this can be understood by no one so well as by a Hindu widow, who is considered as the most forlorn and desolate being on earth. Such a female has her hair cut short, she renounces all ornaments, eats the coarsest food, fasts frequently, and is all but an outcaste in the family of her deceased husband. In British India, until the administration of Lord William Bentinck, many of the widows of Rajputs and Brahmans burned themselves on the funeral pyres of their husbands; and to this day, in the island of Bali, the widows are stabbed with a kris, and their bodies burned with that of their husband. Widow burning is not authorized in the Veda. A widow is merely to accompany her husband to the funeral pile, and there is addressed with a Vedic verse, viz. 'Rise, woman, come to the world of life; thou sleepest nigh unto him whose life is gone: come to us. Thou hast thus fulfilled thy duties of a wife to the husband who once took thy hand and made thee a mother.' The Rig Veda, x. 18, 7, 8, requires the widow to leave the funeral pile before the fire is applied to it; and widows of the Hindus, according to the Atharva Veda, ix. 5, 27, 28, could marry again.

Up till the assumption of Mysore by the British, it was usual to sell widows convicted of unchastity. They were often redeemed by their relatives for 8 to 12 pagodas. Women who eat the sacrificial rice, Beli-anna, at certain pagodas became forfeited to the pagodas, and reside there, performing menial offices. They generally become prostitutes.—*Tod's Rajasthan*, i. pp. 312, 612, 613; *Correspondence relative to Hindu Infanticide*, p. 42; *Elph.* 262; *Lubbock, Orig. of Civil.* 96; *Max Muller, Chips*, p. 35; *Colebrooke's Essays*, i. p. 133; *H. H. Wilson's Select Works*, ii. p. 270; *Barth.*

WOMBAT of Bass and Flinders, a marsupial animal of New Holland, the Phascolarctos of De Blainville, the Koala of Cuvier, the Phascolome of St. Hilaire, the Amblotes of Peron.—*Jam. Ed. Journ.* i., 1826, p. 108.

WOMEN'S CLOTHS. In Southern India this description of clothing is chiefly manufactured at the town of Arnee, in the collectorate of North Arcot. They are of various colours, with borders, chiefly used by Brahman women. They are sold at from 2 to 12 rupees each. See Clothing.

WOOD.

Arunyavu, . . . CAN.	Hezm, ... PERS.
Nath'h, . . . DUKH.'	Choh, ... ,,
Bois, ... FR.	Arunuyum, . . SANSK.
Wald, ... GER.	Davou, . . . ,,
Lacaru, ... GUJ.	Bosque, Selve, . . SP.
Lakra, ... HIND.	Kadu, Kambu, . . TAM.
Bosco, Selva, . . IT.	Chettu, Karra, Koia, TEL.
Lakara, . . . MAHR.	

See Timber Trees.

WOOD. Lieutenant John Wood, of the Indian navy, was born in 1812, and educated at the Perth Academy. He joined the Indian navy when very young, and retired from it in 1842. He became managing director of the Indus Flotilla, and lived in Sind for many years. He died in London, 13th November 1871. From 1835 to 1836, while lieutenant of the navy, he was engaged in the survey of the river Indus, from the sea to Attock. From Attock he descended the river to Kalabagh, passing its falls and rapids. In 1836 he accompanied Sir Alexander Burnes in his mission to Kábul. He crossed the mountains to Kunduz, and was the first European since Marco Polo, to reach Pamir, the Bam-i-Dunia. In 1838 he discovered the source of the Oxus, and received the gold medal of the Royal Geographical Society. His writings were—A Report on the River Indus, in Bl. As. Trans., 1841, x.; Notes on the Lower Part of the Indus and of the Craft thereon, in Bom. Geo. Trans., 1836-1838, reprint, i. p. 89; Journey into the Naga Hills, ibid., 1844, xiii. p. 17; Journey to the Oxus, Lond. 1841, i. 8vo; Journal of a Visit to the Laccadive Archipelago, in Lond. Geo. Trans., 1836, vi. p. 29.

Starting from the mouth of the Indus, Captain Wood accompanied Burnes' expedition up that classical river, and, after arrival at Kábul, was sent forward to Kunduz. Leaving his companion Dr. Lord there, he pushed on eastwards, and struck the Oxus at Fyzabad, passed thence to Jerm, making an expedition to the lapis-lazuli mines; was detained by winter storms at Jerm, in Badakhshan, from Christmas to the end of January, and then followed one of the chief streams which make the Oxus, along its frozen bed to its source in a lake on the great Pamir steppe. The snow lay thickly on the hills and river. During the last marches there was no wood to be found, and the only fuel was the dung of animals encamped in the summer on spots known to the wandering tribe from whom his escort was taken, and now dug out by the men from beneath the snow. Arrived at the lake Sir-i-Kol, as it is called, following Captain Wood, a night had to be passed at this enormous altitude, where the pulses of some of the party galloped 124 beats in a minute, the lowest being 110. In the morning Captain Wood and his followers sallied forth upon the lake, sounding it with great difficulty, for the ice, 2½ feet thick, had to be broken, and 'a few strokes of the pickaxe produced an exhaustion that stretched us upon the snow to recruit our breath.' There was only 9 feet of water, though the lake is 14 miles long by about a mile in breadth. The water was of a reddish tinge,

and 'emitted a slightly fetid smell.' The bottom was oozy and tangled with grassy weeds. At this height the human voice was sensibly affected, and conversation hushed for very weariness. Nature seemed to defy the power of man to search into her hidden mysteries. The sound of a human voice would have been music to the ear, but no one at this inhospitable season thinks of invading these gelid domains; yet Captain Wood made his observations, and returned in safety to give them to his countrymen.—*Dr. Buist; E. I. Marine Surveys.*

Sir Charles Wood, created Lord Halifax, for several years during the changes succeeding the Indian Mutiny of 1857, the Minister for India. His chief work was to amalgamate the Indian with the British army, and his plans needed many changes. His friends claimed for him credit for restoring the Indian finances, but in this he had no share.—*Howell-Thurlow*, p. 22.

WOOD-ALOES. Ak-yun, BURM. The aloes-wood, agallocha wood, or eagle-wood of the Old Testament.

WOOD-APPLE TREE. Feronia elephantum, *Cor.* Wood-apple gum, obtained from the Feronia elephantum, is very abundant, and forms the well-known East India gum-arabic. From its ready solubility without residue, it gives the best mucilage for making black ink.—*M. E. J. R.*

WOOD-ASHES. Tsau-hwui, CHIN.; Rakh, HIND. Used as a detergent remedy in disorders of the skin and hair.

WOODCOCK, Scolopax rusticola, *Linn.*

S. Indicus, *Hodgson.* | Tutatar, . . . HIND.
Sim-titar, . . . HIND. | Sim-kukra, ...

This woodcock is a winter visitant to the more elevated wooded regions of India, the Himalaya, Neilgherries, Pulneys, Shevaroys, Coorg, and doubtless all the other high ranges of Southern India. During its periodical migrations north and south, individuals are occasionally killed in various parts of the country in the plains, near Calcutta, at Dacca, Tiperah, Noacally, Berhampur, Masulipatam, Kaladgi. It arrives about the middle of October, and leaves in February. Mountaineer says they breed in the hills near the snows in considerable numbers, and are seen towards dusk, about the open glades and borders of the forest on the higher ridges, flying rather high in the air in various directions, and uttering a loud wailing cry. The only other true woodcocks are S. saturata, *Horsfield*, and S. minor, *Gmelin.*

WOODFORDIA FLORIBUNDA. *Salisb.* A tree of the Panjab, in Kangra; flowers used in dyeing.

WOOD-MOTH, Wood-carrying moth.

Sacktrager, . . . GER. | Muluka rasari, . TAM.
Dara-kattea, . SINGH. | Kundi puchi, . . ,,

There are five ascertained species of these in Ceylon,—Psyche Doubledaii, *Westw.*; Metisa plana, *Walker*; Eumeta Cramerii, *Westw.*; E. Templetonii, *Westw.*; and Cryptothelea consorta, *Temp.*

Their larvæ construct for themselves cases, which they suspend to a branch, frequently of the pomegranate, surrounding them with the stems of leaves and thorns, or pieces of twigs bound together by threads, till the whole presents the appearance of a bundle of rods about 1½ inches long. From the resemblance of this to a Roman fasces, one African species has obtained the name of Lictor. The German entomologists denominated the group Sacktrager, the Singhalese call them Dara-kattea, or 'billets of firewood,' and regard the inmates as human beings, who, as a punishment for stealing wood in some former stage of existence, have been condemned to undergo a metempsychosis under the form of these insects.

The male, at the close of the pupal rest, escapes from one end of this covering; but the female makes it her dwelling for life, moving about with it at pleasure, and, when alarmed, draws together the purse-like aperture at the open end.—*Tennent's Sketches of the Nat. Hist. of Ceylon*, p. 432.

WOOD-OIL.

T'ung-yu, Siu-yu, . CHIN. | Hung-t'ung-yu, . . CHIN.
Peh-t'ung-yu, . . ,, | Telia gurjun, . HIND.

Several articles met with in commerce are known as wood-oils, but wood-oil proper, in Further India, is obtained for the most part in Assam, Arakan, Burma, and the Straits, by tapping certain trees of the order Dipterocarpeæ, Dipterocarpus alatus, D. costatus, D. incanus, D. lævis, and D. turbinatus, but D. incanus is supposed to yield the best sort, and in the greatest quantity. In Burma, the mode of extraction is as follows:—About the end of the dry season, that is in March or April, several deep incisions are made with an axe into the heart of the wood, and a good-sized piece scooped out; into the hole fire is placed, and kept burning until the oil begins to run, when it is received into a bamboo, and allowed to run slowly drop by drop. In Malacca, also, it is obtained from one of the Dipterocarpeæ, very common in the dense jungles of the Malay Peninsula, and which grows to a great height. When not tapped too soon, the base of the trunk is often of immense girth. The oil which flows from the wound is a mixture of balsam and volatile oil, and when applied as a varnish to wood or other substance, the oil evaporating deposits a hard and durable coat of resin. They are chiefly used as natural varnishes, either alone, or in combination with coloured pigments, also as a substitute for tar in paying the seams of shipping, and for preserving timber from the attacks of white ants. They are said also to be useful as an ingredient in lithographic inks. The oils generally receive the names of the localities from which they are imported. Some of them differ considerably in colour and consistence, but they all possess the same balsamic odour. Dipterocarpus lævis is one of the commonest forest trees of Burma, growing to an enormous size, and yielding as much as 30 gallons of oil each season, without injuring the tree. The oil, when permitted to remain at rest, divides itself into two layers, the upper consisting of a clear, chestnut-coloured liquid balsam, and the lower being in appearance like flakes of granulated sugar, and consisting probably of the surplus resin deposited by the action of the atmosphere. The Telia gurjun wood-oil, as found in the bazars, generally occurs as a brown, oily-looking, semi-transparent liquid, in odour strongly resembling a mixture of balsam of copaiba with a small portion of naphtha.

Mr. Lowe found that the filtered balsam of the gurjun oil formed a brown transparent liquid, which yielded by distillation in 100 parts,—essential oil, 65; hard resin, 34; acetic acid and water, 1. According to Mr. Lowe, the volatile oil possesses all the characters of that of copaiba,

and the hard resin (which he regards as pure copaivic acid, exempt from the soft resin, which, according to him, exists in the greater part of the copaiba of commerce) appears to him indicative of superiority as a medicine. Mr. Lowe recognised in the new resinous balsam the singular property of becoming solid when exposed in a closed vessel to a temperature of 230° F. Copaiba presents no similar phenomenon.

The new balsam, distilled with the addition of a small quantity of an oxidizing agent, as chlorine, hypo-chlorite of lime, or bichromate of potash, yields an essential oil of a fine blue, whilst ordinary copaiba, containing soft resin, affords hardly any coloured essential oil; and cold sulphuric acid produces with copaiba a purple coloration similar to that obtained with cod-liver oil.

Wood-oil from Moulmein, when filtered, is a transparent liquid, of a somewhat dark-brown when seen by transmitted light, but appearing opaque and of an obscure green if viewed by reflected light. It possesses, therefore, in a very marked degree, the dichroism observable in all resin oils obtained by the action of fire. This character determines the nature of wood-oil, and shows that it is not simply a natural product like copaiba, but that it is in part the result of a liquid modification of the Dipterocarpus resin, effected by the agency of heat. Moulmein wood-oil is of somewhat greater consistence than olive-oil; it has a sp. gr. of ·964, and possesses an odour and taste very analogous to those of copaiba. It dissolves in twice its weight of absolute alcohol, with the exception of a minute residue which is deposited upon repose.

The most curious property of the Dipterocarpus wood-oil is that of solidifying when heated in a closed vial to 266° F.; at this temperature the oil becomes turbid, and so gelatinous that it is not displaced upon the inversion of the phial. After cooling, the solidification is yet more perfect; but a gentle warmth, assisted by slight agitation, restores its former liquidity. The resin of Vateria Indica is insoluble in alcohol, and very imperfectly so in ether; whilst the green resin of wood-oil is easily soluble in either of these menstrua.

Camphor wood-oil, from the Dryobalanops camphora, belongs to the class of volatile oils. It is used largely in Singapore as a substitute for turpentine, and sells at from 15 to 20 cents a bottle.

Wood-oil of China, the T'ung-tsze-yu of commerce, is obtained from the seeds of the Elæococcus verrucosa, which grows plentifully in the valley of the Yang-tse. In China, the cold-drawn wood-oil, Peh-t'ung-yu, is pale, and is used for lamps and for varnishing furniture and the better class of umbrellas. A darker thick oil, called Siu-yu, is obtained by heat and pressure from the seeds and fruits of the Elæococcus and Jatropha. It is used in making putty, and in caulking and painting ships and boats. There is a reddish kind called Hung-t'ung-yu. The best wood-oil of China comes to Hankow from Shin-chau-fu, one of the substances of which the well-known and much-prized China lacquer is made.

Deodar or shemanatahu oil, from the Erythroxylon areolatum, and *Sissoo wood-oil*, from Dalbergia sissoo, are empyreumatic medicinal products.

Teak wood-oil is a dull ash-coloured oil, procurable in most of the large bazars of India; when allowed to rest for some time, it separates into two layers, the upper one a dark-coloured clear stratum, and the lower a more solid deposit. Its chief use is for applying to wood-work of all sorts, either alone as a natural varnish, or in combination with certain resins.

Wood-oil from the species of Dipterocarpus is used for painting the beams and wood-work of native houses, and may also be mixed with paint when not exposed to the sun. It is an excellent solvent of caoutchouc; it has been used as a substitute for fish-oil in curing leather, and found to answer. It makes an excellent house varnish, and the Burmese employ it extensively in the manufacture of torches. It is a good substitute for copaiba balsam in the treatment of gonorrhœa, given diffused through almond mixture or gum water. Dose, 10 to 15 minims, repeated thrice daily, or as often as necessary. A compound tincture of gurjun is an efficient substitute for Frank's well-known specific for the treatment of gonorrhœa. Dose, 20 to 30 minims, in a little milk or sugared water.

Wood-oil is decomposed by nitric acid into a black spongy substance, hard and brittle, heavier than the liquid part of the oil into which it sinks; the liquid part assumes a colour nearly like that of port-wine, and is about as fluid as water, much more liquid than the natural wood-oil. A thin coating of that liquid part applied to a board of deal wood formed in 24 hours a transparent varnish perfectly even and bright. The spongy matter above alluded to seems to possess the same properties as a mixture of resin and annotto. Two identical substances are obtained by dissolving with nitric acid the common asphalte used for pavements. A small quantity of sulphuric acid poured incautiously on the second day into the wood-oil which had been in contact with nitric acid, caused it to rush out of the glass with a violent effervescence and disengagement of smoke, aromatic fumes, and a heat of about 200° Fahr.; the aromatic smell was very sweet, and much like benjamin.—*Smith; Roxb.; Journal de Pharmacie*, 1856; *Pharmaceutical Journal*, xiv. xv.; *O'Sh.; Rohde, MSS.*

WOODPECKER, birds of the tribe Scansores, family Picidæ, of the genera Picus, Leiopicus, Hypopicus, Yungipicus, Vivia, Sasia, etc., of Eastern and Southern Asia, are numerous. See Birds, p. 375.

WOOL.

Suf, Wabr, Taftik,	ARAB.	Pashm, Put, Pam,	PERS.
Yangmau, . . .	CHIN.	Welna, ...	POL.
Uld, ...	DAN.	La, Laa, ...	PORT.
Wol, ...	DUT.	Wolna, Seherst, .	RUS.
Laine, ...	FR.	Lena, ...	SANSK.
Wolle, ...	GER.	Oo, Woo, . . .	SCOTCH.
Oonn, . .	GUJ., HIND.	Ull, ...	SW.
Lana, . .	IT., LAT., SP.	Bochu, ...	TEL.
Bulu, ...	MALAY.		

Wool is largely imported into India, and quantities of the imports as well as the fleece of Indian sheep are exported, but while the former are increasing in quantity and value, the exports are falling off.

Imported—	Lbs.	Rs.	Exported—	Lbs.	Rs.
1874-75,	1,542,767	4,27,717	1874-75,	21,290,782	95,99,009
1876-77,	2,145,584	5,32,116	1876-77,	24,056,767	1,07,73,720
1879-80,	3,564,939	8,72,729	1879-80,	26,368,794	1,09,59,723
1880-81,	2,775,554	7,23,434	1880-81,	22,602,600	1,01,41,371
1882-83,	2,781,257	6,89,813	1882-83,	21,561,079	79,03,968

The table-land of the Peninsula, commencing

with the Neilgherries, and proceeding along Mysore to the Dekhan, Kandesh, and Gujerat, presents large tracts of country affording a favourable climate and abundant pastures for numerous flocks of sheep. If from thence we proceed in a north-east direction, passing Berar, Malwa, Rajputana, to the district of Hurriana and the province of Dehli, we shall see, supported on the natural pastures of the country, immense herds of cattle, and numerous flocks of sheep, the latter affording wool utilized by the natives for making blankets (kumlee or cumblee) of different degrees of fineness, which form a considerable article of the commerce of these provinces, and one is possessed by every labourer and artisan. Again, the Himalaya, on their southern face, present a European-like climate, remarkable, however, for being influenced by the periodical rains. The temperature varies according to the elevation; but they afford everywhere rich pastures, and support a fine breed of sheep, of which the wool is employed by the mountaineers to form their clothing. The northern face of these mountains is as remarkable for its dryness as the southern is for its moisture; the cold is excessive, and the animals which are pastured there are covered with shaggy hair or with long wool, and a fine down. It is here that the shawl-wool goat finds its most congenial climate.

Sir A. Burnes says,—(1) The wool of Turkestan is obtained chiefly in the neighbourhood of Bokhara and Samarcand, and is more celebrated than that of Kābul. This is sent to Amritsar in the Panjab, where it is used to mix with the shawl-wool of Tibet in making what are called Kashmir shawls. It is the produce of the goat of Bokhara, and not of the sheep of Turkestan, and is called 'put,' in contradistinction to 'pashm,' which is used to express the fleece of the sheep. (2) The wool or put of the goat of Kābul was not then exported, being entirely consumed in the native manufactures. It is procured from goats, and chiefly from the hill country of the Hazara to the west of Kābul, and between that city and Herat, which has an elevation of about 6000 or 8000 feet above the level of the sea. (3) The countless flocks of fat-tailed sheep in Kābul produce an abundance of wool. The fleece is of a glossy white colour, and is in Kābul called 'pashm-i-burrak,' and the fabrics prepared from it 'burrak,' in contradistinction to 'puttu.' It sold at from 2 to 2½ Kābul rupees the seer, or sixteen pounds. It is brought in from all directions for sale in Kābul; and Sir A. Burnes states that he 'can scarcely put a limit to the supply, since the extent of pasture land in those countries is not overrated at four-fifths of the whole surface of the country, and a very large portion of the population, such as the Lohani and Ghilji, are shepherds, who remove from pasture to pasture, and rear their flocks with great care and attention. Nature, however, does as much as the people; for aromatic plants, in which sheep delight, are exceedingly abundant, and it is universally believed that they have considerable effect on the quality of the wool.'

Wool obtained from the fat-tailed variety of sheep is used in the manufacture of cloths and carpets, and is also exported to India. It is of wide distribution; the sheep abound at Peshawur, Kābul, Kandahar, Herat, and other places. Kelat and the surrounding country produces sheep's wool in great abundance. This sheep is apparently indigenous also to the Salt Range.

Kirman is a tract of country close by the Persian Gulf, to the south of Persia. Its wool finds its way into the Panjab in considerable quantities. It is a soft, delicate wool, but its principal use at present unfortunately appears to be the adulteration of genuine pashm. The Kirmani wool from the Persian Gulf finds its way to Amritsar pretty largely from both Kurachee and Bombay, and is one of the staples used in adulterating the pashm or genuine shawl-wool.

The *Lena* shawl-wool is the produce of the goats of the Tibetan Himalaya. It used to be a prevalent opinion that these goats were found in Kashmir, but that celebrated valley is far too warm and damp for them.

The best *shawl-wool* is produced in the vicinity of Garo, Manasarowara, and the elevated lands to the eastward. The shawl-wool is the fleece of the goat next the skin only; the outer coat is coarse hair, and the two colours are white and light brown. The dogs of Tartary have also a soft down below the hair, very little inferior to that of the goats.

Goat's hair is very commonly produced in almost every district of the Panjab, and called 'jat.' It is used for making ropes, also for matting, and for the strong bags wherein grain, etc., is carried on the backs of oxen. Grain dealers use rugs made of it in the shops in which the grain is poured out when being winnowed or weighed. At Dala and Gyani, in Hundes, four or five fleeces of wool, according to size, sold for one rupee, which averages 1½ to 2 annas or 3d. the pound. Shawl-wool is produced in a variety of districts in Tibet.

The wool of Eastern Turkestan is known as *Turfani* wool, so called from the city of Turfan. It is this exquisitely fine wool from which the finest shawls and other fabrics of Kashmir are made.

The following are the wools used in the Panjab:—

(*a*) *Pashm*, or shawl-wool properly so called, being a downy substance found next the skin and below the thick hair of the Tibetan goat. It is of three colours,—white, drab, and dark lavender (tusha). The best kind is produced in the semi-Chinese provinces of Turfan, Kichar, and exported via Yarkand to Kashmir. All the finest shawls are made of this wool; but as the maharaja of Kashmir keeps a strict monopoly of the article, the Panjab shawl-weavers cannot procure it, and have to be content with an inferior kind of pashm produced at Chathan, and exported via Leh to Amritsar, Nurpur, Ludhiana, Jalalpur, and other shawl-weaving towns of the Panjab. The price of white pashm in Kashmir is, for uncleaned, Rs. 3 to 4 per lb.; ditto, cleaned, Rs. 6 to 7 per lb.; of tusha, uncleaned, Rs. 2 to 3 per lb.; cleaned, from Rs. 5 to 7.

(*b*) The *fleece of the Dumba sheep* of Kābul and Peshawur is sometimes called the Kābuli pashm. It is used in the manufacture of the finer sorts of choga, an outer robe or cloak with sleeves worn by Afghans and other Muhammadans of the western frontier.

(*c*) *Wahab Shahi*, or *Kirmani wool*, the soft white wool of a sheep found in Kirman, a tract

of country in the south of Persia, by the Persian Gulf. It is used for the manufacture of spurious kinds of shawl-cloth, and for adulterating the texture of Kashmir shawls.

(*d*) The *hair of a goat* common in Kābul and Peshawur, called pat, from which a texture called pattu is made. (Qu. put?)

(*e*) *The woolly hair of the camel.* From this a coarser kind of choga is made.

(*f*) *The wool of the country sheep of the plains.*

A considerable and increasing quantity of wool is exported from India, mostly all of it, latterly, from Bombay, and chiefly to Great Britain, France, and America. Wool of Afghanistan from the white sheep has been increasing as an export, via Kurachee to Britain. The white and the rufous-coloured sheep are shorn twice a year. Sind is not a wool-producing country, though it is to be obtained in its western confines to a great extent, particularly in Cutchi and the Jalawan mountains of the Brahui. The Hindus of the country carry on the trade, and thus much of the article coming into the Bombay market through Sind is misnamed Sindian wool. Many districts, however, accessible through Sind and the Indus, yield this important article abundantly; that furnished by the Kelat territories finds its way to Bombay via the mountainous road to Sonmiani.

Mr. Powell mentions that all or most of the mammalia of the Himalayan regions and other similarly situated localities, at an elevation of 11,000 to 13,000 and 14,000 feet, which are consequently subject to severe winters and a high rarity of atmosphere, whether domesticated or wild, such as the dog, yak, karghan, etc., possess a wintry inner coat of 'pam,' of different degrees of fineness. The pashm of the goat is alone the marketable commodity; but the hair of the yak and Kirghiz camel is in parts cropped, and both in a cleaned and coarse state is made into cloth of different degrees of fineness, for Kirghiz (nomadic) tents, clothing, bedding, saddle-bags, ropes, etc. etc. The hair picked from marketable pam at Kashmir supplies material for a different branch of manufacture, viz. of ropes, saddle-bags, and haircloth of different kinds, qualities, and uses.

Antelope wool of Lahoul, called in Tibetan Tsodky-i-lena, or properly b-Rtsodky-i-lena, is very precious.

Ibex hair, or wool of the teringole or kin, the ibex, is the wool that makes the famous and rare ibex shawls.

Sheep's wool, black and white, of Lahoul, called luggi-bal, was selling in 1866 for 6 Cutchi seers per rupee; it is exported to Kullu and Kanawar.

Yak's wool of Rupshu and Zanskar, called Kullu, is the soft under-hair of the yak, used to make bags for sheep loads, and the felt soles of shoes.

The *Rampur chadr* is a soft wool fabric manufactured from the wool of the sheep of Rampur and Spiti, which are there the beasts of burden. The wool of the Dumba or large-tailed sheep of Peshawur and Kābul is called Kābuli pashm, and is manufactured into the choga or sleeved cloaks worn by the Afghans.

Pattu fabrics are made from the pat wool of Kābul.

The *pashm of Changtan and Turfan* are of the first class, and are monopolized by Kashmir.

The *pashms of Rodakh*, Ladakh, Spiti, Rampur, Bashahir are a second-class wool, and form the staple export to the shawl manufacturing cities of the Panjab.

Pasture.—The nature of the soil on which the sheep and goats are fed, has most influence on the texture and quality of their wool. There can be no doubt that the valleys of the Sutlej, Ravi, Chandrabaga (or Chenab), and other tributaries of the Indus, supply grazing grounds not to be surpassed in richness and suitableness in any part of the world. The population inhabiting them are chiefly pastoral, but, owing to sloth and ignorance, the wool they produce is but small in quantity, full of dirt, and ill cared for in every way. The Government of the Panjab have made efforts to improve the breed by the importation of Merino rams, but hitherto with little success. However, a truss of Merino wool produced in the Hazara Hill district, to the north-west of the Panjab, and sent to England in 1860, was there valued at 1s. 6d. per lb. Sheep whose pasture grows on calcareous poor soil have short, harsh wool, while those on rich loamy argillaceous soils have longer and softer hair. The same animal produces different kinds of wool. On a sheep the finest wool is on the spine from the neck to near the tail, including one-third of the breadth of the back. Rampur is a great mart for the reception and forwarding of wool.

Pashm is the chief article of trade in Khotan and Ladakh. It is cut once a year; the wool picked out is sent to Kashmir, but the hair is made into ropes, coarse sacks, and blankets. After the hair of the goat has been cut short with a knife in the direction of its growth, or from the head towards the tail, a sort of comb is passed in the reverse direction, and brings away the finer wool almost unmixed with the coarse hair. If not shorn as the summer commences, the animals themselves rub off the wool.

The goats are found domesticated all over the mountainous country of Western Tibet, particularly in the provinces of Ladakh, Rodakh, and Garo. Changthan is the name given to the elevated plateaux where innumerable flocks are pastured. Merchants bring down large quantities from Ghar-garo or Gurdokh in Changthan, where a large commercial fair is held annually in August (Bhadon). The Lahoul traders bring Changthan wool through Ladakh. In Changthan, at the Arghils, cattle-sheds and Yaitaaks pasture-grounds, the usual price of the raw article or coarse pam is about 2 vuttees 14 seers pucka, or 8 lbs. (English) for Rs. 3, or about 6 annas the pound weight; and tobacco is bartered for about double its weight of coarse Changthan pam. So also green and red dyed goat-skins of Panjab manufacture, with shoes and boots of the same article (the latter made in Turki fashion) are bartered at Yarkand, Aksu, Ilchi, Turfan, etc., for treble and quadruple their weight of raw pam. In the same manner, not many years since, the glass beads and buttons of Birmingham were wont to be bartered for an equal weight of gold-dust or reg-i-sar throughout the entire country of Gilgit, Yarkand, Mazhuji, Chitral, and along the south base of the Mustagh and Kara-korum.

The mountain paths between Rampur and Spiti are so precipitous, that sheep, more surefooted than larger beasts, are commonly used to carry burdens of from 16 to 20 lbs. The sheep are driven from village to village with the wool on, and as the required quantity is cut from their backs, they are laden with the grain which is received in exchange, and which, when the fleece is all disposed of, is carried into Chinese Tartary, and sold at a profitable rate. It is the custom for the shepherds of Chumurti to give an order, while the crops are yet green and on the ground, for any amount of grain they may require, which, when the crop is ripe, is stored up by the cultivator until the summer of the ensuing year. When the shepherd arrives with his flock, he gives the wool in exchange, and receives his grain, which he puts into small bags, and drives back his flock thus laden. About 2000 maunds of wool are annually brought to Rampur, and about half that quantity of pashm. The price of the wool averages about 4 lbs. for the rupee, and pashm, Rs. 2 to 4 for 2 lbs.

The beautiful pashms of Changthan and Turfan, and the soft white fleeces of Kirman, embrace three distinct kinds of wool, distinguished not only by the climate and soil where they are produced, but also by the fact that they are the produce of different animals.

These classes are—1st. The genuine pashms of Changthan, Turfan, etc., which are monopolized by Kashmir, and those second-class pashms, the produce of Rodakh, Ladakh, and even Spiti, Rampur, and Bashahir, which form the staple export to the shawl manufacturing cities of the Panjab, Amritsar, Ludhiana, Jalalpur, Nurpur. Included by analogy of locality only, are the wools of the ibex, so rarely seen, and the yak, the thick tails of which animals are prized for chauries (fly-flaps).

2d. The wools produced beyond the N.W. frontier, including those of Peshawur, comprise the Dumba sheep wool, the wools of Kābul, Bokhara, and that imported from Kirman; in fact, all classes of wool produced on or beyond the N.W. frontier. The trade in these wools is now extensive, both by the Peshawur and other routes. Second class of wools, produced at or about Peshawur, Kābul, Kandahar, and Persia or Kirman.

British Wools.—Since the middle of the 18th century there have been many fluctuations in the price of wool in Great Britain, from 14s. 6d. the tod about the year 1780, to 65s. in 1864 and 22s. 2¼d. in 1883. Taking the wool produce of England at 5,500,000 tods per annum, the value of this produce in the year 1864 was £17,554,166, whereas the same quantity in the year 1883 would represent a value of £6,104,427,—that is, taking the mean average price of wool in 1864 at 63s. 10d. per tod, and in 1883 at 22s. 2¼d. per tod. The difference in value between the produce of these two years is thus no less than £11,449,739.

Thull.—The wool produced in the Thull is shipped at Bukkur or Leia, and sent down to Bombay, and averages Rs. 10 a maund. In Ludhiana district pashmina is prepared from pashm, the fine hair of the Tartar goat. The hair is brought down on mules through Ladakh, Rampur, and Bashahir, and, in exchange, cotton piece-goods, brass, and iron are taken back. The price of pashm varies from Rs. 2 a seer. On receiving the pashm, the manufacturer's first business is to separate the coarser from the finer or underneath hair; out of each seer about 6 chitaks of the latter are taken. It is then washed in rice water, and made into thread. This sells at from 4 to 12 rupees per seer, according to quality. The thread made of the finest hair is woven into the well-known Rampur chadr, which are extensively manufactured. From the coarser thread are made shawls of sorts, and the cloth known as pashmina.

Woollen manufactures are largely produced in High Asia, in India, and in China; vast quantities of wool are woven into blankets of various degrees of fineness, for the use of the people, called kumlee or cumblee, also chadr. The numda or felts, both white and coloured, are used for tents, floorcloths, and quilts. The woven fabrics are made into shawls, choghas, and barani or overcoats, and the fine blankets known as Rampur chadr are prized, and Central Asia is famed for its carpets. The burruk fabric, the abra and looi blankets, are made of sheep's wool; the pattu and patta malida (dressed pattu) fabrics are largely worn in Afghanistan, and at Herat kuruk is manufactured from goat's hair.

The jute carpet is indigenous to Persia and Turkestan, where the best are still made. In India, the foundation for the carpet is a warp of strong cotton or hempen threads; and the peculiarity of the process consists in dexterously twisting short lengths of coloured wool into each of the threads of the warp, so that the two ends of the twist of wool stick out in front. The projecting ends are then clipped to a uniform level, and the lines of work are compacted together by striking them with a blunt instrument (Birdwood). The historical seats of the industry are in Kashmir, the Panjab, and Sind, and at Agra, Mirzapur, Jubbulpur, Warangal in the Dekhan, Malabar, and Masulipatam. Velvet carpets are also made at Benares and Murshidabad, and silk carpets at Tanjore and Salem. At the Exhibition of 1851, the finest Indian rugs came from Warangal, the ancient capital of the Andhra dynasty, about 80 miles east of Hyderabad. Their characteristic feature was the exceedingly numerous count of the stitches, about 12,000 to the square foot. 'They were also perfectly harmonious in colour, and the only examples in which silk was used with an entirely satisfactory effect' (Birdwood). The price was not less than £10 per square yard. The common rugs, produced in enormous quantities from the jails at Lahore, Jubbulpur, Mirzapur, Benares, and Bangalore, sell in England at 7s. 6d. each.

The woollen fabrics produced by the Chinese are felts for the soles of shoes and winter hats, and a sort of rug or carpet. It is not woven in looms from the yarn, but is made in small pieces by a fulling process which mats the fibres together. The consumption of it by shoemakers is very great, and nearly as large for winter hats among the common people. The rugs are woven with coloured threads in rude imitation of figures, and are extensively used in the northern provinces; the pieces are a few feet square, and sewn together for carpets or bedding. Hair and wool are both employed in their construction.

Great Britain in 1883 exported woollen fabrics

to the value of £18,320,016, of which there was cleared for India, £370,545 value; to China, £242,456; to Japan, £62,455. India in 1882-1883 imported to the value of Rs. 77,52,049.—*MacGregor*, p. 50; *Powell, Handbook; Econ. Prod. Panjab*, 183; *Ann. Ind. Adm.* xii. 108; *Imp. Gaz.*

WOON. BURM. A Burmese governor or minister. This word literally signifies burden, as woon-gye, great woon; woon-douk, prop of the woon.—*Yule*, p. 3.

WOO-PEI-TZE. BURM. Galls imported from China, which are said to be produced by an aphis; they are more bulky than common galls, of very irregular shape, and hollow.

WOO-TAI-SHAN, a city of China to which the Mongols make pilgrimages, prostrating themselves all the way.

WOOTZ, or Indian Steel. Wootz is a term applied by Dr. Heyne to the steel ingots manufactured in the south of the Peninsula of India. It is supposed to be his variation of the word Ucha, meaning superior, high; Ucha kabbina, superior iron. The name in Mysore is Ukku tundu, also Ukkina tundu, also Ukku gatti, lumps of steel. See Steel.

WORAGALLI, a name of the town in maps called Warangal.

WORM. Several creatures receive this common name; a tailless batrachian, the Ichthyophis glutinosus, is an immense earth-worm, common in Sikkim. It is a native of the Khassya mountains, Singapore, Ceylon, and Java.

Amphitrite, or sea-worm of Java, lives in holes of the great solid madrepores. The gills of these lovely creatures are in the form of spiral ribbons of brilliant orange, green, and blue. These gaudy plumes are alternately extruded and retracted, and, seen through the pellucid water, present a very singular and beautiful appearance. —*Adams' Travels*, p. 51; *Hooker's H. J.* ii. p. 25.

WORMIA BRACTEATA. *W. Ic.* Dillenia bracteata, *W. Ic.* A very handsome tree of the Coimbatore Hills, in the Bolamputty valley, on hills near Coimbatore, and the Animallays, in Mysore, and on the North Arcot and Cuddapah Hills. It is well deserving of cultivation for ornamental planting, etc.—*Beddome.*

WORMIA TRIQUETRA. *Rottl.* Diyapara, SINGH. A moderate-sized tree, common in the moist, warmer parts of Ceylon, up to an elevation of 2000 feet.—*Thw. En. Pl. Zeyl.* p. 4.

WORMWOOD.

Afsuntin, . . . ARAB.	Artemisia absinthum, LAT.
Yin ch'in hau, . CHIN.	Bubuk, ... MALAY.
Dhowna, Mustaru, HIND.	Buranjasif kohi, . PERS.
Murwa, ... ,,	Dona, ... SANSK.
Domolo, . . . JAV.	Mashipattiri, . . TAM.
Gund-mar, . . . KASH.	

This European plant is found in the Indian bazars. The wormwood of the Old Testament is the Artemisia abrotanum.—*O'Sh. Disp.* p. 414.

WOTAY KOROSHANUM. TAM.

Wotay koroshenam, TAM. | Wontay koroshnam, TEL.

This is a bright yellow biliary concretion, found in the gall-bladder of certain camels. It is highly prized as a beautiful yellow paint, but is very expensive.—*Ainslie.*

WRESTLING in India is a favourite amusement for the rich, who keep largely overfed men for the purpose of being pitted against each other. These are so full of flesh, that their distinctive forms are almost hidden, though this is more owing to the development of muscle than to deposit of fat. On one occasion, to add to the interest of a mela, wrestlers of reputation from Agra, Muttra, Cawnpur, and other places were sent for, and for three mornings successively the rajas and others were entertained with some splendid wrestling matches. There was no cruelty or brutality exhibited, but fair, manly trials of strength and dexterity, which elicited applause, and which attracted on the last day a crowd of at least 50,000 people. Wrestlers of Japan, before engaging, challenge by placing a hand on each thigh, just above the knee; then stooping slightly, lifting each leg in turn, at the same time slap the thigh as the foot comes sharply to the ground.—*Dehli Gazette.*

WRIGHT, EDWARD, an eminent mathematician and engineer, who accompanied the Earl of Cumberland on his first voyage to the Azores. In 1616 he was appointed by the East India Company, on a salary of £50 a-year, to compile their charts.—*E. I. Marine Surveys.*

WRIGHTIA, a genus of plants belonging to the natural order Apocynaceæ, of which Wrightia coccinea is a large tree; flowers externally green, internally deep orange-red, having something of the perfume of the pine-apple. Wrightia Wallichii is found in the Tenasserim Provinces, and on the slope of the Neilgherries, from about the middle of the ascent to an elevation of between 4000 and 5000 feet.—*Mason; W. Ic.*

WRIGHTIA ANTIDYSENTERICA. *R. Br.*

Nerium antidysentericum, *Linn.*

La-thou, . . . BURM.	Veppala, ... TAM.
Conessi bark tree, ENG.	Kodaga pala, . . . TEL.
Inderjau, . . . HIND.	Pala chettu, . . . ,,
Cheeri, ... SANSK.	Kodisa pala, . . . ,,

A small tree of Malabar, Ceylon, the Isle of France, common in many parts of India, also in Tavoy. The bark was formerly in request under the name of Conessi, and is still esteemed by the natives in dysentery and bowel complaints. It appears to have lost its value in commerce, by not being distinguished from the bark of Wrightia tinctoria, which grows in the same places. The very bitter seeds are boiled in milk, and given in hemorrhoids and dysentery, and in decoction in fever and gout; also as an anthelmintic. The bark of the root is astringent and febrifuge, and is used as a specific in dysentery and bowel complaints. Its milky juice is also used as a vulnerary. The tree has peculiarly-scented flowers, with a form resembling those of the jasmine. The wood is white, of a fine grain, and susceptible of polish, and is used by the turner and cabinet-maker. The seeds are covered with a kind of downy tuft, somewhat resembling the down of the thistle. Two kinds of inderjau seeds are distinguished in Hindu medicine, the sweet and bitter. The former has a pleasant taste, not unlike that of oats, which they also resemble somewhat in appearance, but are longer and more slender. An infusion of this roasted seed is given as a safe and gentle restrainer in bowel complaints; the decoction is employed in fever cases. The latter, from W. antidysenterica, are intensely bitter, and used as a vermifuge. The bark was greatly lauded in the 18th century by Geoffroy, and it appears to be a remedy of no mean value, A new vegetable alkaloid ex-

tracted from the bark is resinous and uncrystallizable, of a powerfully bitter and somewhat acrid taste, insoluble in water, but very soluble in alcohol, ether, and chloroform; only one part procurable from one thousand parts of dry bark. It is supposed that the seeds contain it in much larger quantities.—*Cat. Ex.*, 1862; *Voigt; M. E. J. R.; O'Sh.; Ind. Ann. Med. Sci.*, Aug. 1856.

WRIGHTIA MOLLISSIMA. *Wall.*

Khilawa, . . . HIND. | Dudhia, . . . HIND.

Grows in the Nagari Hills, in Kamaon, Bijnour, and Garhwal, and is abundant in some moist forests. It grows in the Siwalik tract, near the Indus, up to 3500 feet. It grows to the height of 15 feet. Its wood is light yellow, soft, and white, not very durable, fine-grained, polishes well; used chiefly for combs.—*Drs. Cleghorn, Stewart; Mr. Thomson; M. E. J. R.*

WRIGHTIA TINCTORIA. *R. Br.*

Nerium tinctorium, *Roxb.* | W. Rothii, *D. C.*
Bhur-kuri, . . BOMBAY. | Pallay maram, . TAM.
Kala-kudu, HIND., MAHR. | Palava-ranu, . . ,,
Hya maraka, . . SANSK. | Chitti ankudu, . . TEL.

A small, pretty tree, found in the Coimbatore, Godavery, and other forests of the Madras Presidency, and very common in all the forests of Bombay. It affords a very beautiful wood, white, hard, and close-grained; coming nearer to ivory than any Dr. Roxburgh knew, and valuable for turning. Pale-green soft leaves; deciduous in the cold weather; flowers in March and April; white follicles in pairs, from 12 to 18 inches long, of which as they ripen the ends of each pair curiously join. It is a common tree in the Coimbatore jungles. The leaves afford an inferior kind of indigo, hence the Mahratta name. It is extracted by scalding.—*Wight; Roxb.; Gibson; Riddell; Cleghorn; Captain Beddome.*

WRIGHTIA TOMENTOSA. *Rom. et Sch.*

Nerium tomentosum, *Roxb.*

Nelam-pala, . . MALEAL. | Koyila mokiri, . . TEL.
Pedda pala, . . . TEL. | Putta, Puta, Jilledu, ,,

A small tree, not very uncommon in the Central Province of Ceylon, grows in the Circars and Lower Godavery jungles. Wood appears close-grained, not used. The juice is a permanent yellow dye. Bark given internally for scorpion bites.—*Thw. Pl.* p. 193; *Beddome; Voigt.*

WRIGHTIA ZEYLANICA. *R. Br.*

W. antidysenterica, *R. Br.* | Sudduidda, . . SINGH.

Common in the south of the island of Ceylon. —*Thw.* p. 193.

WRITING.

Haraf (s.), Haruf (pl.), AR. | Scriptura, ... LAT.
Raqm, Irqam, ... ,, | Navasht, . . . PERS.
Tahrir, ... ,, | Lipi, ... SANSK.
Ecriture, ... FR. | Escritura, ... SP.
Schrift, ... GER. | Ayuthu, Ezhuttu, . TAM.
Likhawat, . . . HIND. | Rashathee, ... TEL.
Scritura, ... IT.

All Asiatic races regard writing characters with a respect amounting to veneration. This feeling is earnest with Muhammadans, influenced by the possibility of the words representing the sacred name of God; and the Chinese in their towns employ people to collect expended manuscripts from houses, to secure them from desecration. Amongst Muhammadans of India, a holy man, to cure sickness, writes an invocation on a board or slate or paper, which is washed off and given to the sick person to drink. Writing has been brought to its present perfection by much labour. It has been in use from prehistoric times, and throughout 5000 years, at least, learned men have been inventing and improving alphabets.

The most recent writer is Dr. Isaac Taylor, in 1883, on the alphabet. He tells us that two kinds of writing are in use by the natives of the world,—alphabetic and non-alphabetic; that the Egyptian hieroglyphic writing is believed to have been the source of all existing alphabets; that every system of writing has begun with rude pictures of objects, and such pictures, more or less conventionalized, were gradually accepted as the representatives of words, and afterwards became the symbols of more or less elementary sounds. Learned men describe this process in saying that writing began with ideograms, pictures, or pictorial symbols, which afterwards developed into phonograms or symbols of sounds, either verbal signs, syllabic signs, or alphabetic signs.

There are known five great systems of picture-writing, which have been independently invented. These are (1) the Egyptian, which developed into the monumental hieroglyphic; (2) the cuneiform, which branched into nine forms; (3) the Chinese, of five forms; (4) the Mexican, with its two branches; and (5) the Hittite, which developed into the Carchemish hieroglyphics, the Asia Minor syllabary, the Lycian alphabet, and the Cypriote syllabary. The Chinese characters illustrate a graphic system which has never advanced beyond the most rudimentary stage of conventionalized picture-writing. It is a language of roots, and is monosyllabic. The people of Japan use the Chinese characters, but their language is polysyllabic; and the Chinese characters, which are verbal phonograms, have been used by the Japanese for the expression of the polysyllabic Japanese words by being treated as syllabic signs.

The diffusion of alphabets has been largely effected by trade routes, by conquests, colonization, and religion. In the 5th century B.C., Darius Hystaspes recorded in the Behistun inscription his restoration of the forgotten text and commentary of the Zendavesta. Also Hermippus of Smyrna, who lived in the middle of the 3d century B.C., quoted and summarized the contents of the twenty books, each consisting of 100,000 lines, which, he says, had been composed by Zoroaster; and Masudi, an Arab historian of the 10th century A.D., says the Zendavesta was written on 12,000 cow-hides, in a character invented by Zertusht. It is believed that the character used by Zertusht was a variety of the Aramean.

Buddhism, a missionary religion, has eagerly availed itself of the art of writing for the propagation of its doctrines; but Aryan Hindus have preferred the oral transmission of the Vedas; and Kumarila Bhatta, of the 8th century A.D., mentions writing only to condemn its use. The sons of the three higher castes of Hindus were required to learn by heart the sacred text; and to the present day youths in some of the Brahmanic families can repeat the whole of the Rig Veda, learned, as their ancestors acquired it thousands of years ago, from the mouth of a teacher, so that the 'Vedic succession' should never be broken.

The Arabic letters and the Arabic numerals are, with some modifications, in use amongst the Muhammadans of Arabia, Persia, Turkey, Turkestan, Afghanistan, Baluchistan, and India, and the

writing forms receive the names of Toghra, Nashk, Talik, Nashk-Talik, Shafia, Raqm, and Shakastah. The Cufic alphabet is not now in use.

The Christian missionaries, also, have effected great things in establishing the best of the many dialects current amongst the tribes, as among the Malay of the Archipelago and the Hindi-speaking nations of Hindustan and the Panjab.

Pahlavi group.—The primitive Semitic alphabet has had three branches,—the Phœnician, the Joktanite, and the Aramean. From the Phœnician came the alphabets of Europe; those of India were from the Joktanite; while the Aramean became the source of the alphabets employed by the various non-Semitic races in the provinces of the Persian empire, and it exterminated the other Semitic scripts of Western Asia. This group is usually called the Pahlavi.

Iranian.—The four alphabets of the Iranian group have been designated the Indo-Bactrian, the Pahlavi, the Armenian, and the Georgian. The three Pahlavi alphabets are the Arsacidan, Sassanian, and Parsee.

The Arsacidan type was developed in Persia during the period of the Parthian empire, B.C. 256 to A.D. 226. The Sassanian or Pahlavi proper was formed during the Sassanian dynasty, A.D. 226 to 651.

The Parsee or Indian Pahlavi, often called the Zend alphabet, is that which was used by the Parsee fugitives after their flight to India. The Armenian and Georgian alphabets are the only living representatives of the Iranian alphabet, the Parsee being understood and used only by an ecclesiastical class. St. Mesrob, A.D. 400 (for he was canonized), had been a secretary at the court of the Armenian kings Varazdates and Arsaces IV., but resigned in order to follow a religious life. Moses of Chorene gives Mesrob the credit of constructing the Armenian alphabet, and Moses used it in his translation of the New Testament into the Armenian.

India.—The distinct alphabets employed in India outnumber all the other alphabets used in the remainder of the world. But the vernacular scripts divide themselves into four or five great classes, essentially coincident with divisions of race, language, or religion; and besides, there are in use the alphabets of Annam, Arabia, Armenia, Baluchistan, China, Afghanistan, and Syria (Karshuni), with peculiar local varieties of the Nashki alphabet, which have arisen in Bombay, Malabar, Sind, and Singapore.

There are nearly twenty alphabets descended from the Devanagari script, in which the Sanskrit literature is mostly conserved. Others have been derived from the Pali, the old alphabet of the Buddhist scriptures; about twelve belong to the Dravidian family of alphabets, nearly as many to the Gujerati or Western type, and others to the Eastern or Bengali class.

Mr. H. T. Prinsep gave the following list of transitions of the Indian alphabet from the time of Asoka, with some of the most marked local varieties at present in use, viz. those used in the sculptures of

Asoka's edicts of the 3d century B.C.
Western caves.
Sah inscription at Girnar.
Gupta inscription at Allahabad.
Valabhi plates from Gujerat.
Kutila inscription of the 10th century A.D., at Bareilly.
Nerbadda.
Kistna.
Telinga, modern.
Tibetan, modern.
Square Pali.
Gujerati.
Panjabi.
Kashmiri.
Bengali.
Devanagari.

And he gave the following ten modifications of the Sanskrit alphabet from B.C. 543 to A.D. 1200, viz.—

Fifth century B.C., rise of Buddhism.
Western caves.
Third century B.C., Sanskrit inscriptions of Asoka, Junagarh.
Second century A.D., Gujerat dated plates.
Fifth century A.D., Allahabad inscriptions of the Gupta dynasty.
Seventh century A.D., Tibetan alphabet formed from Sanskrit.
Ninth century A.D., Kutila inscriptions from Bareilly, A.D. 992.
Eleventh century A.D., Bengali alphabet as now modified. Adisur, A.D. 1065.
Modern Devanagari alphabet.
Old Pali alphabet of the Burmese, compared with A.D. 200.

Dr. Isaac Taylor, however, has since arranged the alphabets of India into two classes,—the ancient and the modern or vernacular.

From the 3d century B.C. to the 10th century A.D., thirteen *ancient* alphabets were in use in India. They comprise—(1) Maurya from the inscription of Asoka at Girnar; (2) the Andhra of the western cave temples; (3) that of the Sah or Kshatrapa at Girnar; (4) the Gupta on the Allahabad pillar; (5) the Valabhi from the Gujerat plates; (6) the Chalukya or Kistna from the Amaravati plates; (7) the Nerbadda from the Seoni plates; (8) that of the Assam inscription; (9) the Kutila alphabet of Bareilly; (10) the Kiousa or lapidary Pali; (11) the Tibetan; (12) the Passepa; and (13) the Devanagari.

The *vernacular* alphabets of the Peninsula of India are those of Assam, the Kutila, Gurumukhi, Nagari, Bengali, Orissa, Gujerati, Sindi, Multani, Telugu, Canarese, Grantha (Tulu), and Tamil.

The vernacular alphabets of Further India and the islands are the Kiousa, Burmese, square Pali, Singhalese, Pegu, Ahom, Battak (old), Battak (new), Rejang, Lampong, Tagala, Bisaya, Macassar, and Bugi. All these have originated from one single source, the alphabet used in the edicts of Asoka, the Buddhist king. He was zealous for his faith, and in the years 253 to 250 B.C. he promulgated edicts enjoining obedience to its ordinances. Between Peshawur and Ceylon seventeen versions of these edicts, engraved on rocks and pillars, have been discovered, and likewise several dedicatory inscriptions on caves or rock-cut temples constructed by him; and there are also six pillar inscriptions, of which the best known are those at Delhi and Allahabad. In the 2d and 13th edicts, Asoka mentions as his ally and contemporary the Yona-raja or Ionian king Antiyoke, and also refers to the Chatura rajane, or four rajas, Turamye, Antikini, Maka, and Alikasandare, who are known to be Ptolemy II. of Egypt, Antigonus of Macedonia, Magas of Cyrene, and Alexander II. of Epirus.

These inscriptions of Asoka are written in three local Pali or Prakrit dialects, and two wholly distinct alphabets are employed. An inscription at Kapurdigiri is in the Indo-Bactrian alphabet, an alphabet of Iranian origin; while that used in the other versions of the edicts was at first named the Lat or pillar character, but latterly the Indo-

Pali, and it is this one which is the source of the existing Indian scripts.

The Kapurdigiri alphabet is an isolated monument of a great Bactrian alphabet, in which the Zoroastrian books and an extensive literature had been in all probability conserved. The Kapurdigiri form was put aside during the time of Alexander of Macedon and his officers, but later on, in the time of Asoka, it was again utilized for this inscription. It has, however, been in use in Ariana (Herat), Margiana (Merv), Bactriana (Bokhara), Alexandria, Arachosia (Kandahar), and in India throughout the Panjab. The alphabet of the Kapurdigiri inscription has had several names,—Aryan, Bactrian, etc. It is now called the Indo-Bactrian. It is slanting, cursive, and irregular, singularly free from looped forms, and written from right to left. The Indo-Pali or Lat is written from left to right; it is regular, upright, and rigid, with numerous looped forms. The source of the Lat alphabet has been variously suggested.

In the 12 centuries between Asoka, B.C. 250, and the 10th century A.D., various vernacular scripts of India were formed. In three inscriptions of this epoch, namely, the Kutila or Bareilly inscription of A.D. 992, the Chalukya or Kistna inscription of 945, and a Kawi inscription of 919, the characteristic features of the three great alphabetic types of India, the Nagari, the Dravidian, and the Pali, can unmistakeably be recognised.

The Nagari or Devanagari group of alphabets are employed in Kashmir, the Panjab, the N.W. Provinces, Oudh, Rajputana, Gujerat, Central Provinces, Maharashtra, Behar, Bengal, and Orissa, and the Tibetan alphabets belong essentially to this group.

The Devanagari is the chief character employed for writing the ancient Sanskrit language. Devanagari is of comparatively modern origin.

The Gurumukhi character is used by the Sikhs.

Kashmir has two alphabets,—the Sarada, nearly identical with the Devanagari, and the Thakuri, inclining to the Gurumukhi type.

Mahrati is written in two characters; that used for books is called Bal-bodh, 'intelligible to a child,' and is nearly the same as the Devanagari; the other, called Modi, is cursive of the Gurumukhi type.

The Bengali prototype is to be seen in old Gauri inscriptions.

Uria of Orissa belongs to the same class, but has many archaic forms; it is now written on palm leaves with an iron style.

Nepal uses four scripts,—the Newari, which is nearly the same as the Devanagari; the Banjin Mola, belonging to the Bengali type; with the Kaiti-Nagari and the Ranja of intermediate character.

The Sindi and Multani alphabets have some old letters from the Indian, several characters borrowed from the Gurumukhi or Gujerati alphabets, overlaid by the Devanagari.

Three alphabets are used in Tibet, namely, the ecclesiastical Utshen or Dvoujam, primitive forms which are said to have been cut on wooden blocks for printing in the 7th century; the Umin, from the northern alphabet of India, is a cursive form; and the Khyugagi is still more so.

The Kchab or Passepa is said to have been invented by the Grand Lama Bachspa (Pa-ssc-pa) in A.D. 1259, during the reign of Kublai Khan. Five of the letters added to the Mongol Galik alphabet are still used by the Kalmuks on the Lower Volga.

The *Dravidian* alphabets of Southern India were derived from the character of the western cave temples, and as early as the 4th century A.D. This gave birth to separate types. The first of these, represented by the inscriptions of the Vengi and Chalukya dynasties of the Dekhan, was the source of the Telugu and Canarese alphabets; while from the other, represented by the Cera inscriptions, proceeded the Tamil alphabet, the Tulu, the Malealam, and the Grantha or book alphabet, used by the Tamil Brahmans for the Sanskrit transcriptions of their sacred books. From it are derived two vernacular alphabets in use on the Malabar coast; one is the Tulu Grantha and the other the Malealam, from which several characters were borrowed by the Christians of St. Thomas in order to supplement the Syria (Karshuni) alphabet which they obtained from the Nestorian missionaries.

Several of the Tamil letters are supposed to have been obtained from the ancient Vatteluttu or Vattezbattu, which is still in use by the Moplah of S. Malabar.

Maldive alphabets are two. The old Dewehi Hakura is derived from the Dravidian alphabets of the mainland. It is written from left to right, and is still in use in the Southern Atolls. The newer alphabet of the Northern Atolls is called the Gabali Tana, and is written from right to left like the Nashki alphabets. Nine of its 18 letters are merely Gobar or Arabic ciphers with phonetic values assigned to them; the other 9 seem to be Telugu-Canarese numerals.

Singhalese has an isolated alphabet of the Pali class, but modified by early Grantha influences. It is confined to the southern half of Ceylon, Tamil occupying the northern.

Burma, Siam, Pegu, and Cambodia employ the Pali alphabet in conjunction with another character apparently of somewhat different origin.

There are three Burmese forms. These are essentially identical, but are very dissimilar in appearance. They are the Kyouk-tsa or stone writing. The square Pali is used in their sacred books; and the Tsa-lonh or round is their ordinary writing, and is scratched on palm leaves.

The Siamese use the square Pali for their sacred books, but have an elegant cursory character for ordinary use.

The Lao, a Siamese race, as also the Cambodians, have two alphabets,—an ecclesiastical and a secular.

The Lepcha or Rong alphabet, used by the people of Sikkim, is supposed to belong to the Ahom group.

The Annamese possess a script which has been adopted from the Chinese phonograms.

The Eastern Archipelago languages are very numerous. Mr. A. R. Wallace names 59 of them, but the writing characters are only eight or at most nine in number. The Javanese alphabet, like all others in the Archipelago, is written from left to right, each letter is distinct and unconnected, and the writing is perpendicular and not slanting. It is the character used for the Javanese proper, the Sunda, the Bali, and it is believed the Lombok, and including Palembang

in Sumatra; it is current among twelve millions of population.

In Sumatra, beginning from the west, the first evidence of a native written character is among the Battak, and it is singular that a nation of cannibals should possess the knowledge of letters. There was assuredly nothing of the kind in Europe or continental Asia until long after men had ceased to eat each other. The form of the Battak letters is horizontal.

The Korinchi alphabet, among the people of this name in Sumatra who border on Menangkabau, has 29 characters, and consists of horizontal or slightly raised scratchings.

The Rejang is the alphabet of Lemba and Pasummah on the western side of Sumatra. It consists of 23 substantive characters, formed of upright strokes.

The Lampung nation, which occupies that portion of the south-western side of Sumatra which lies opposite to Java, divided from it only by the Straits of Sunda, has an alphabet of 19 substantive letters with double or treble consonants, making them up to 44.

The Achcen and Malay of Sumatra are written in the Arabic character.

The Bima alphabet, formerly in use amongst the Bima people in the island of Sumbawa, east of Sumatra and Java, has now given way to the alphabets of the Celebes.

In Celebes are two distinct alphabets,—Bugi and Macassar. The Bugi, at present in use over the whole island, extends to Bouton and Sumbawa, and wherever the Bugi nation have settled or colonized. The modern Bugi has 23 substantive characters, consisting mostly of small segments of circles running horizontally. The Bugi letters have no resemblance to those of Sumatra or Java, or even to the obsolete alphabet of Sumbawa. The other alphabet of Celebes is now obsolete.

The last alphabet of the Archipelago is the Philippine, that of the Tagala nation of the great island of Lucon or Luçonia, and consists of 13 characters. It is the only one existing in the whole of this group, and seems at one time to have been used among the civilised tribes of the neighbouring islands, having spread even to Magindanao and Sulu. The forms of the letters are rather bold and more complex than that of the Sumatran alphabets.

Thus in the Archipelago are nine distinct alphabets, but Dr. Taylor says the Sumatra alphabets are degraded types of the old Kawi. He also says that the prototype of the Eastern Malay alphabets seems to be the Eastern cursive alphabet, which is represented by the Vengi and Chalukya inscriptions in the south, and by the Assam inscriptions in the north. The Tagala is a type of the Eastern Malay alphabets, and is the prototype from which the alphabets of Celebes and Macassar have been derived. The Tagala alphabet must have been conveyed by mariners from the Indian shores.

Javanese letters, also, are based on an alphabet of the Pali type, obtained through the old Kawi, known from copperplate grants of the 9th and 10th centuries. The ancient Kawi of Java is called there the Buddha's alphabet, Akchara Buddha. The modern Javanese has additional letters derived from an earlier alphabet, and is also used in Borneo.

The Corean is a primitive form of the Indian alphabet, supposed to be introduced by Buddhist teachers. It is from an ancient Pali or Tibetan type.

At present, in the south and east of Asia, the Roman and Italic characters, with slight diacritic points, are used everywhere by the British, French, Dutch, Portuguese, and Spaniards, alike in writing, printing, and engraving, and the simplicity and the facility of these forms commend them. The plan of transcribing oriental languages by Roman letters was first used in India and Japan by the Jesuits of the 16th century. Books printed by them at Goa about A.D. 1586, and at Amacosa (Japan), still exist.

Throughout all the south and east of Asia there are many races and numerous broken tribes who remain unlettered, though dwelling in the midst of civilisation. Such tribes affix their marks to documents, the implement or weapon in use with them, a dagger, a staff, a balance, a trowel, etc.; those of them who do write with letters have adopted one of the alphabets of the more advanced nations around them. The helot or predial slave races, known in the Peninsula as the Pariah, the Holar, the Mhang, the Mhar, have for two thousand years been dwelling as the village labourers, in hourly contact with people following the Buddhist and Brahmanical teachings, but they have not acquired either the religion or the learning of their masters. The Gujar and Chamar of N. India are all illiterate. The great Gond nation, now partly under Muhammadan rule, partly under British sway, have no written character of their own, and very few of them know how to read or write; the same remark is applicable to the Bhil, the Mundah, Ho or Kol, the Kond or Ku,—perhaps all the Kolarian races. The Ahir, the Med, Mer or Meena, the Gonds in Bustar, the forest or mountain races, the Chaura, Saura, Suar, Chensuar, the Yanadi, and the Korawa of the eastern side peninsula, the Toda, Kotah, Badaga, or Irular of the Neilgherry Hills, do not know how to read or write, nor is it known that any of the Kurb or Kurumbar race of the Peninsula of India can do either. This is remarkable, because with their great flocks they must have numerous sales, the written record of which would be useful to them; but this remark is equally applicable to many other races engaged in trading transactions, such as the Binjara or Lambara, who till recently were the chief carriers throughout India, the Chakili or Chamar, leather-workers; the Mali or gardener races; the Upuravar; the Beldar or Waddara, labourers, road-makers, tank-diggers, who take great contracts for roads and other public works; and the smaller broken tribes of Beder or Veddah of the Peninsula and Ceylon; the Rhodia of that island, the Yerkala, the Kaikara, the Baura, the Makwa, and many others.

The Mongol and Manchu of Central Asia have characters which they use in writing. It is not known whether the tribes near the Chinese frontier and Tibet, the Gyami, Gyarung, Tak-pa, Man-yak, Thochu, Sok-pa, Horpa, have any knowledge of letters; and the same remark is applicable to the broken tribes in Nepal, particularly to the languages of the Kiranti group in East Nepal. It is not known that any of the tribes near the valley of Assam, the Aka, Dofla, Abor, Bodo, Dhimal, Koch'h, Garo, Naga, Mishmi, Miri, Mikir, Singpo, Shendu, or Khassya have any written

tongue. The Rev. Dr. Mason and Mrs. Mason taught letters to the Karen, but the Ku-ki, Ku-mi, Ka-mi, Pwo, Khampa, Kam-ti, Shan, and other tribes in the north-east of Burma are not known to have any scriptory means of intercommunication.

The nations of Europe write and print from left to right.

The Chinese, Japanese, and Mongol write in perpendicular lines.

Some of the ancient Greeks used the double mode, called the boustrophedon or plough-wise, running from the right to left, and left to right in the alternate lines.

Machines called type-writers have been invented for printing Roman and Italic characters, and for figures. — *Dr. Isaac Taylor, M.A., LL.D., on the Alphabet; Professor Max Muller, Ancient Sanskrit Literature; Thomas' Prinsep's Antiquities; Professor A. H. Sayce; Lubbock's Origin of Civilisation; Crawfurd's Dictionary; A. R. Wallace, Malay Archipelago; Layard's Nineveh*, ii. p. 184; *Weber*, p. 15; *G. Rawlinson*, ii. p. 376; *Renan, Histoire des Langues Semitique.* See Languages.

WULUR, a lake 12 miles long, in Kashmir, through which the Jhelum flows; on its little island are the remains of one of the ancient temples of Martund.—*Adams.*

WUN, chief town of Wun district, Berar, in lat. 20° 3′ N., and long. 79° E.; pop. (1876-77), 4233. The greater part of the district consists of a wild and hilly country, formed by offshoots from the Ajunta chain, which runs from west to east across the south of Berar. The mass of the Hindu population consist of Kunbi, Bari, Mali, Dher, Kolam, etc. The Banjara number 36,948; while the hill tribes consist chiefly of 37,348 Gonds. In Wun district the Banjara form two distinct tribes, the Charans and the Mathura, while the mendicants are called Dhari. The women distinguish themselves by their deer-horn ornaments, and by the beautiful embroidery worked with their own needles on their skirts and bodices. They do not permit their daughters to marry before puberty. When grown up, the young girl is not allowed to sleep on a bed, and for a month after marriage the bride appears veiled before the rest of the community. Evidence of the occurrence of coal has been obtained throughout 13 miles of country, from Wun to Papur, and for 10 miles, from Junara to Chicholi, opposite Nokora.—*Imp. Gaz.*

WUNT. Sansk. The second titular honour given to a Hindu in India, as Raja Eshwara Doss, Dyawunt Bahadur, also Raja Indrawunt Bahadur. Wunt, maharaja, raja, raja-raian, rai-raian, bahadur, and rae are the titles granted by rulers to their Hindu civil officers; wunt being the highest, and rae the lowest in grade.

WURNA SANKRA. Sansk. Mixed castes, said to be employed in Northern India to include new castes admitted into the Hindu religion. The only mixed castes to be found in Southern India consist of illegitimate children, the offspring of the dancing girls attached to the temples, of whom the girls are brought up to their mothers' occupations, and the boys as temple florists and musicians.

WU-TSAU. Chin. Tiger poison. This is a well-prepared extract from a root grown in the interior of China, which presents all the appearance of Aconitum ferox. A very minute quantity of the Wu-tsau, when put on the tongue, produces intense tingling and numbness in the tongue and lips after it is chewed. The Wu-tsau is the name of the plant from the root of which the poison is prepared. It is used by certain tribes in the interior of China.

WUTTAN. Arab. A native country, a patrimony, a property. Wuttundar is a class of hereditary officers in Central India, and means there a holder of native or home rights. Properly Watn.—*Malcolm's Central India*, i. p. 176.

WUTTU, a Rajput race in the tracts along the Sutlej, about Pak-pattan.

WUZAET. Arab. A daily performance of duty.

WUZAR. Pukhtu. Lamentation.

WUZEEREE, one of the largest and most important tribes in Afghanistan, brave, warlike, but predatory. They hold the rugged and lofty hills adjoining the south-west portion of the Kohat district (that is, the western part of the Miranzai valley and the hills round Bahadur Khel), and the north-western border of the Dehra Ismail Khan (that is, the valley of Bannu, and the plains of Murwut and Tank). These hills run down to the point where the great Sulaiman range commences; near this point the Gomal pass debouches from the hills almost opposite Tank. The valley of the Gomal forms the Golari pass, through which a large portion of the traffic to and from Afghanistan and Central Asia enters into India, and scarcely inferior to the Khaibar pass of Peshawur or the Bolan pass of Sind. The hills on either side of this pass are held by Wuzeeree; the Wuzeeree Hills form the western limit of the Joorduk pass, which is the main line of communication between Bannu and Kohat. Just to the east of this pass lies Bahadur Khel, and also the villages of Kharra and Lutumur, at which three places the Trans-Indus mines are situated. The Wuzeeree Hills also command the outlets of the Kuram and Goombeli rivers into the Bannu valley. The Wuzeeree tribe are numerous, and subdivided into various sections. The birthplace of this race would seem to be the snowy range which runs to the south-east of Jalalabad and Kābul. From this range they appear to have moved downwards towards the Dehrajat border. They are noble savages, of pure blood, pastoral habits, fierce disposition, and wild aspect. They can muster, probably, 20,000 or 30,000 fighting men. But though they are less addicted to internecine contests than other hill tribes, they are yet not apt to join all these forces together against an external foe. As soldiers, they are not equal to the most martial tribes. Many of them live in tents, or in temporary dwellings resembling tents; in the winter frequenting the more genial clime of the lower ranges, and in summer retreating to feed their flocks in higher altitudes. Some of them have engaged in cultivation, and have encroached on the weaker tribes of the plains; of these, again, many will only cultivate during the cold months, and as the heat approaches will reap their crops and retire to the mountains. Some members of the clan who have taken up their abode as cultivators in the Bannu valley, have become British subjects.

WYNAD, the highland division of the Malabar district, Madras, lying between lat. 11° 27′ and 11° 58′ N., and between long. 75° 50′ 45″ and 76° 41′ E.; containing (in 1881) 16 amshoms or parishes, and 88,091 inhabitants, and covering an area of 1180 square miles. The Wynad consists of a table-land amid the Western Ghats, 60 miles long by 30 broad; average height above sea-level, 3000 feet. Bounded on the north by Coorg, on the east by Mysore (Maisur), on the south by the Neilgherries and Ernad taluk, and on the west by Calicut, Kurumbranad, and Kottayam taluks of Malabar. Gold seems to be almost universally distributed throughout the soils and quartz veins of the Wynad. Gold has always been washed for in the beds of the Wynad rivers, and from 1877 to 1881 there arose the wildest speculation in the form of 21 gold mining companies, with capital to the amount of about three millions; but in 1882 the bubble burst. The forests contain much valuable timber. In the teak belt are several bands of Kurumbar, some of the Jani, and others of Mooly caste. They amount to about—Kurumbar, 200; Gurchea, 50; Panniar and Pooliar, 100; Chetty and squatters, 50. The former live entirely in the forest. They are the only axe-men, and without them it would be difficult to work a forest. The Kurumbar, through their headmen, are held responsible, and the Chetty are also responsible for their Panniar or farm slaves. The Kurumbar has no lack of labour. His services are constantly called for by the wood contractor and the planter. They will not leave their haunts in the forest for any time.—*Rep. Con. For.* p. 26, and 1861-62, p. 1.

X

X is the 24th letter of the English alphabet, and has been borrowed from the Greek; there is no such letter in any Asiatic language. At the beginning of words it has the sound of z; at the end of words and in the middle and end of some, it takes the sound of ks, as in lax, axis; but in the middle of other words it has the sound of gs, as in example, exhaust. It has been sometimes the practice to represent the Sanskrit ksh by the letter x, but ksh is an acknowledged compound of k and sh, and its representation therefore by a single letter is not advisable, nor is it necessary.

XAGANOS. Gr. The Khakan or Khan of the Tartar races.

XANADU, the seat of Chengiz Khan in China.

XANTHIUM ORIENTALE. *L.*

X. Indicum, *Kon.*

Bun-okra, . . .	Beng.	Paraswapu chettu,	Tel.
Arishta, . . .	Sansk.	Tala noppi chettu, .	,,

The Indian xanthium is of all India: its leaves are used as a yellow dye, and its prickly fruit as a demulcent. The prickly involucre is tied to the ear-ring to cure headache. The name means headache tree.

XANTHIUM STRUMARIUM.

Si-rh, Ts'ang-rh, .	Chin.	Khagarwal, . .	Hind.
Gokru, Kalau, .	Hind.	Lane-tsuru, . .	,,
Tsur, ...	,,	Wangan-tsuru, .	,,

This plant was formerly used in medicine in Europe, and its burs and the prickles on them are still employed in India and China; its seeds yield a lamp oil, and are made into a flour. An extract is prepared from the roots, and in China applied to ulcers.—*Smith.*

XANTHOCERAS SORBIFOLIA. Wan-kwang-kwo, Chin. A beautiful flowering tree, common in Pekin, the N. of China, at King-chau or Peh-chi-li.—*Smith.*

XANTHOCHYMUS PICTORIUS. *Roxb.*

Stalagmitis pictorius, *G. Don.*

Dampel, .	Beng., Hind.	Chikati mraku, . .	Tel.
Rata, .	Ghorka, Singh.	Tamalama, . . .	,,
Iswaramamadi,	Sing., Tel.		

This beautiful tree is remarkable for its black flowers. It grows in the mountainous districts of S. India, and is very plentiful in the Rangoon, Pegu, and Tounghoo districts. It was formerly supposed to be one of the trees yielding gamboge, but the product is found not to possess the elements of gamboge. It is very abundant in the woods in Coorg, is also met with in Wynad, below Sisparah on the Neilgherries, S. Canara, the western slopes of Neilgherries, and other localities in the western side of the Madras Presidency and on the Bombay Ghats; and it is cultivated in gardens.—*Roxb.* ii. p. 633; *Rohde, MSS.; Hind. Theat.* ii. p. 101.

XANTHOPHYLLUM FLAVESCENS. *Roxb.* A large tree, a native of the hilly parts of the province of Chittagong.—*Roxb.* ii. p. 222.

XANTHOPHYLLUM VIRENS. *Roxb.* Gundi, Beng. A large timber tree of the forests of Sylhet; wood remarkably hard and useful.—*Roxb.* ii. p. 221.

XANTHORRHŒA, *sp.*, the yellow gum tree or grass tree of N. S. Wales. The natives produce fire by rubbing two pieces of the trunk together.—*Bennett*, i. p. 62.

XANTHOXYLACEÆ. *Lindl.* A natural order of plants, comprising the genera Brucea, Xanthoxylum, Blackburnia, Lacuris, Toddalia, Ailantus, Eurycoma, and Ptelea. All this order, to a greater or less extent, possess aromatic and pungent properties. The Ailantus are large trees, and their timber is used for various purposes in the countries in which they grow. A. glandulosa is a native of China and the Moluccas, where it is called Ailanto. It attains a height of 60 feet. When the bark is wounded, it gives out a resinous juice, which hardens in a few days. The wood is hard and heavy, and is susceptible of a very fine polish. A. Malabarica is a large tree, a native of Malabar. The wood is used for making sheaths for spears, etc. A resinous juice flows from the bark when wounded. The fruit is triturated with maize, and mixed with rice in decoction, and used as an application in ophthalmia. The cosmetic wood of Mergui is from one of the Xanthoxylaceæ, and is a useful, fragrant wood, sold in the bazar, which is said to come from Mergui, but Mr. Mason never saw the tree; and Brucea antidysenterica, the Woginos of Bruce, was long supposed to yield the false Angustura bark, and from which the alkali Brucia was obtained; but the former is ascertained to be the bark of Strychnos nux vomica. —*Eng. Cyc.; Mason; Royle.*

XANTHOXYLON, a genus of plants belonging to the Xanthoxylaceæ, of which the following are S. Asia species:—

X. alanthoides, *S. and Z.*, Japan.
X. alatum, *Roxb.*, Nepal, N. India.
X. Avicennæ, *D. C.*, China.
X. budrunga, *D. C.*, Assam.
X. hostile, *Wall.*, Himalaya.
X. limonifolium, *Wall.*, Khassya.
X. nitidum, *D. C.*, China.
X. obovatum, *Wall.*, Khassya.
X. ovalifolium, *W.*, Shevagherry Hills.
X. piperitum, *D. C.*, Japan.
X. planispinum, *S. and Z.*, Japan.
X. rhetsa, *D. C.*, Peninsula of India.
X. schinifolium, *S. and Z.*, Japan.
X. sepiarium, *W.*, Pulicat Hills.
X. triphyllum.
X. violaceum, *Wall.*, Nepal.

Species of this genus occur in China and Japan; extend in India to Simla, in lat. 31° N., where X. hostile, differing little from X. alatum, is found. Species run southwards along the Himalaya to Nepal and Sylhet, then to the Malay and Indian Peninsulas, and to the islands on the east of the African continent. In India, X. budrunga, rhetsa, alatum, and hostile, are used wherever they are indigenous, for the warm, spicy, pepper-like pungency of their capsules, a property which is participated in by their bark and other parts. The capsules and seeds of X. hostile, called tejbul by the natives, are employed in Northern India for intoxicating fish, and chewed as a remedy for toothache; they are also given as the Faghureh of Avicenna, as X. piperitum and Avicenniæ are in China and Japan, and are considered an antidote against all poisons. Dr. Royle thought that in many cases they would be of considerable use as a stimulant remedy. The bark of Xanthoxylon ochroxylon and the pods of Acacia tortuosa are used for tanning in the West Indies.—*Roxb.; Royle, Ill. Him. Bot.* p. 157; *Murray.*

XANTHOXYLON ALATUM. *Roxb.*

Shuh-tsiau,	CHIN.	Hwa-tsiau,	CHIN.
Ch'uen-tsiau,	,,	Pepper-wort,	ENG.
T'sin-tsiau,	,,	Durmur,	HIND.

A native of Nepal and the hilly countries north of Bengal, Rohilkhand, and Oudh, eastward to China; flowering in Calcutta in the hot and rainy seasons. Every part of the plant possesses a peculiar aromatic pungency, and the jet-black seeds are used medicinally by the natives.—*Roxb.; Smith.*

XANTHOXYLON AVICENNIÆ, Fagara Avicenniæ, *Roxb.*, a native of China, a powerful stimulant, and used as an antidote against poisons. —*Roxb.*

XANTHOXYLON BUDRUNGA. *D.C.*

Fagara budranga, *Roxb.*

Toung-than,	BURM.	Young-tha-ji,	BURM.

A small thorny tree of Assam, and in Sylhet is called budhrung. The seeds have a warm, spicy flavour, and the natives use them medicinally. The dry capsules are found in the bazars under the name of Kek-ka-la. The bark and large thorns of the trunk are used. The seeds abound in a rich aromatic oil, and are sold in the bazars under the term tejbul or tezbul. The tree is about 20 feet high in the Pegu and southern parts of the Tounghoo districts, where it grows upon the banks of streams. The fruit is about the size of a pea, and the outer coat contains an exceedingly fragrant balsam.—*Roxb.; M'Clelland.*

XANTHOXYLON HOSTILE. *Wall.*

Tirmal, Tezmal,	CHENAB.	Timboor, Timbar,	JHELUM.
Tezbul,	HIND.	Timbroo,	KANGRA.

This scandent shrub is common in N.W. India and the N.W. Himalaya up to near the Indus, also in Kaghan, in Kashmir, and Kamaon. It is strongly armed with prickles, hence its name hostile. Its twigs serve the natives as tooth-brushes. Thicker branches are useful in carving and turnery, are made into walking-sticks and clubs, and are used by fakirs to triturate the hemp plant in preparing their beverage. In using a triturator possessing pepper-like aromatic qualities, they save the pepper, which is usually added to hemp compounds. The capsules and seeds are chewed as a remedy in toothache, also the sharp prickles which are attached to the bark by large bases. The aromatic fruit is used as a condiment. The capsules and seeds are used for intoxicating fish, and are supposed to be the Faghureh of Avicenna.—*Honig.; Mr. Thompson; Stewart; Cleghorn.*

XANTHOXYLON PIPERITUM. *D.C.*

Fagara piperita.		Wu-chu-yu,	CHIN.

It grows in India, in Japan, and in China. It furnishes a powerful aromatic, used by the Chinese in the room of ginger and pepper. The active principle resides chiefly in the fresh leaves, the dry bark, and the pericarp. Physicians, in sore throats, apply a poultice made of the bruised leaves and rice flour, and its powdered leaves are mixed with camphor, and applied to the Porrigo decalvans of children. X. budrunga, rhetsa, alatum, and hostile are used, wherever indigenous, for the warm, spicy, pepper-like pungency of their capsules.—*Roxb.; O'Sh.; Lindley's Fl. Med.* p. 215; *Royle*, p. 157; *Smith.*

XANTHOXYLON RHETSA. *D.C.*

Fagara rhetsa, *Roxb.*

Mulila,	MALEAL.	Rhetsa maram,	TAM.
Kattoo-keena-gass,	SINGH.	Rachcha manu,	TEL.

Grows in the Central Province of Ceylon, and near Colombo, also on the coast hills of Peninsular India, the Circars, the Animallays, the western forests generally. It is a large tree, armed with sharp prickles; capsules have a strong aromatic taste; the seeds are used instead of pepper. In the Tamil language, Rhetsa maram means council tree, as it is under the branches of this tree that the hill people assemble to discuss all matters of public interest.—*Roxb.; Thw.* i. p. 69; *Voigt; Riddell.*

XANTHOXYLON TRIPHYLLUM. *Juss.*

X. Zeylanicum, *D.C.*		Loonoo-ankenda-gass,	SINGH.
Evodia triphylla, *D.C.*			
Fagara triphylla.			

Very abundant in Ceylon up to an elevation of 5000 feet; a var. β occurs near Ratnapura. A resin is obtained from this tree, but in too small quantities to be useful in a commercial point of view.—*Thw.* i. p. 69.

XAVIER. Francis Xavier was born 7th April 1506, in Castle Xavier, at the foot of the Pyrennees, about 21 miles from Pampeluna, and derived his pedigree from the kings of Navarre. At college he became acquainted with Ignatius Loyola; and, as Father Francisco Xavier, he was a joint founder, with Loyola, of the order of Jesuits, and after his death was canonized by the Romish Church. Jesuit Christians have been the most politic of all proselyte makers. Everywhere theirs has been a career at least of temporary triumph, in China, India, and the regions of the South Pacific. He sailed for the east on the 7th April 1541, and, after a stay of six months at Mozam-

bique, he landed at Goa on the 6th May 1542. In April 1549 he embarked at Goa for Japan, sailing to the region of the further east with his Bible, to preach the gospel in the name of the Supreme Church. Xavier quitted Japan for China in 1551, and on the 14th April 1552 he again sailed from Goa for Malacca. He died on the 2d of December 1552, at Shan-Shan, on the Canton river, not far from Macao. The coffin was afterwards taken to Malacca, and then to Goa.

In 1547, the salvation of Malacca from the Achinese was ascribed to the sudden appearance of Saint Francis Xavier, who was then on his pilgrimage through the east, and had recently made 600 or 700 converts among the pearl fishers of Manaar. At the period of his arrival, Malacca was threatened by a formidable invasion from the opposite island of Sumatra, which was delayed, though not abandoned. He visited Ternate in 1546. He afterwards returned to Malacca, and visited Japan between the years 1547 and 1549, and by his efforts the Christian religion was fairly established in Japan by 1550; but in the year 1597 their persecutions began, and numbers, variously stated at from 300,000 to 1,000,000, were massacred and hurled from rocks.

He was successful in his mission among the Paravar fishermen of the Tinnevelly coast. They had received protection from the Portuguese against the oppression of the Muhammadans, and many of them had already become Christians, but Xavier completed the work, and they acknowledge themselves his children or disciples.—*MacFarlane's Japan; St. John's Ind. Arch.; Hough, Christianity in India; Abbé du Bois; Bik.*

Padre Geronimo Xavier, author of a work, The Mirror of Holiness, a Life of the Messiah, written at the request of the emperor Akbar. He was a relative of St. Francis Xavier.

XENOPHON, with 10,000 Greeks, conducted by the younger Cyrus, marched from Sardis to the neighbourhood of Babylon. The object of Cyrus was to place himself on the Persian throne, in the place of his elder brother, Artaxerxes Muemon; but as Cyrus fell at the battle of Kunaxa, within six months of the commencement of the expedition,—it set out in March or April B.C. 401,—after his death they commenced their retreat. This occupied them one year, and in October or November B.C. 400 they recrossed the Bosphorus of Thrace to Byzantium. The ferries of rivers in India and the south of Asia are crossed in various ways, but on the Tigris and Euphrates, the Upper Indus and its affluents, the practice of 3000 years still continues. Xenophon's 10,000 were ferried over on inflated skins, and three slabs in the British Museum show the representation of the king of Assyria crossing the Euphrates in this mode.

XERXES I., the Great, the Ahasuerus of Scripture, B.C. 485-465. Xerxes II., B.C. 424.—*Bun.*

XIMENIA ÆGYPTIACA. *Roxb.; Juss.*

Balanites Ægyptiaca.

Pen-lay-hsee, . .	Burm.	Garee, ...	Tel.
Hingen, Hingot, .	Hind.		

Grows in the Kotah district. The shell of the nut is used to make crackers in fireworks. Wight gives Ximenia olacioides, 1861.—*Roxb.*

XIMENIA AMERICANA. *Linn.*

Pen-lay-hsee, . .	Burm.	Nakkera, . . .	Tel.
Konda nakkera, .	Tel.	Ura nakera, . . .	,,

This tree grows in the Godavery forests. Its fruit is used in medicine, and the powder of its yellow-coloured wood is used by the Coromandel Brahmans in their religious ceremonials. The fruit resembles the flavour of the peach, as does the kernel of the nut; the leaves also smell like the common laurel. In Masulipatam and Guntur the ryots distinguish two kinds,—this and a small stunted kind, which grows in their fields, and which they say never attains a larger size. They use the bark medicinally for their cattle. It is X. Russelliana, *Wall.—Roxb.; Elliot; Beddome.*

XIPHIAS GLADIUS, the sword-fish, has been renowned since the times of Ælian and Pliny for its courage in attacking whales, and even ships. Like the tunny and bonito, it is an inhabitant of the deeper seas, and, though known in the Mediterranean, is chiefly confined to the tropics. The dangerous weapon with which nature has equipped it, is formed by the prolongation and intertexture of the bones of the upper jaw into an exceedingly compact cylindrical protuberance, somewhat flattened at the base, but tapering to a sharp point. Its assaults upon the whale have been incontestably established.

Xiphias platypterus, the Indian sword-fish, is about 6 feet long. It swims swiftly, and makes rapid darts amongst a shoal of fish, and, after transfixing as many as possible on the beak or sword, it shakes them off by a retrograde movement, or by moving the sword violently from side to side, and eats them.

In the seas around Ceylon, sword-fishes sometimes attain to the length of 20 feet, and are distinguished by the unusual height of the dorsal fin. Those both of the Atlantic and Mediterranean possess this fin in its full proportions only during the earlier stages of their growth. The Indian species are provided with two long and filamentous ventral fins, and have been formed into the genus Histiophorus. Histiophorus immaculatus was previously known only by a single specimen, captured in the Red Sea by Ruppell.—*Tennent's Ceylon*, p. 328; *Bennett, Whaling Voyage*, i. p. 270.

XYLIA DOLABRIFORMIS. *Benth.*

Inga xylocarpa, *D.C.*
Mimosa xylocarpa, *Roxb.*
Acacia xylocarpa, *Willd.*

Pyn-ka-do, . . .	Burm.	Boja, . . .	Godavery.
Tirwa, ...	Can.	Irool, ...	Tam.
Iron-wood, . . .	Eng.	Konda tangadu, .	Tel.

This large tree, the iron-wood or irool, is widely distributed in the forests of the Madras Presidency, in the forests at the foot of the South Canara and Malabar Ghats; it is often very gregarious, forming forests of itself to the exclusion of almost all other trees, but it is seldom of fine growth when found in this state. It flowers in March and April when destitute of leaves, and ripens its seed in August and September. The wood is of a very dark-red colour, fading to dark-brown, heavy, hard, close-grained, and not easily worked; when planed up, the surface has an unctuous feel and not very agreeable smell. A cubic foot unseasoned weighs 68 to 74 lbs., and 58 lbs. when seasoned, and its specific gravity is ·928. It is excellent for posts, railway sleepers, naves of wheels, and all purposes demanding great strength, and is in use for building purposes, for knees in shipbuilding, house and bridge posts, ploughs, boat anchors, the construction of carts, and other purposes.—*Beddome, Fl. Sylv.*

XYLOBALSAMUM of the ancients is the wood of Balsamodendron Gileadense, *Kunth.* M. Fee ascribes to B. Berryanum three distinct products, —balsam of Mecca, a wood called xylobalsamum, and fruits termed carpobalsamum. Tradition is rich in anecdotes relative to the origin of this balsam. The Muhammadans relate that it sprang from the blood of the slain in Mahomed's conflict with the tribe of Harb? and that the prophet used the balsam for the resuscitation of the dead. It is much used in medicine by the hakims as a stimulant, tonic, and somewhat astringent remedy, and as an external application to indolent sores. It is also employed as a perfume and cosmetic.—*Faulkner; Fee.*

XYLOCARPUS GRANATUM. *Kœn.*

Carapa Moluccensis, *Lam.*	Granatum littoreum, *Will.*
Pussoor, ... BENG.	Sea cocoanut, . . ENG.
Pen-lay-pyoun, . BURM.	Madahul, . . MALAY.
Pen-lai-ung, . . ,,	Kadul-gaha, . . SINGH.
Pen-lay-ung, . . ,,	Kandalanga, . . TAM.

This xylocarpus tree (from ξυλον, wood, and καρπος, fruit) grows in the south of Ceylon, in the Sunderbans, and in the forests of the delta of British Burma. Very abundant all along the seashore from Amherst to Mergui. It is used by the Burmese for all parts of houses, posts, flooring, walls, etc.; is strong, and splits with difficulty. A cubic foot weighs 47 lbs. Is recommended for handspikes, helves, spokes, and handles of tools, also for shot-boxes and packing-cases. Fruit ripens in June and July. This is not the cocos-de-mer of the Seychelles, but is common in the mangrove swamps; and, growing near the shore, its fruit falls into the water and floats out upon the sea, which gives rise to its name. The fruit is not edible, but is exceedingly astringent, and is regarded by the natives as a specific in cholera.—*Roxb.; O'Sh.; Mason; Brandis; Thw.; Captain Dance.*

XYLOCOPA TENUISCAPA. *Westw.*

X. latipes, *Drury.* | Carpenter bee, . ENG.

A hymenopterous insect which perforates large beams of timber, as also living trees, by boring holes through them. On one occasion, at Kurnool in the Ceded Districts, one of them was seen to kill a sparrow by a single thrust of its sting. Any intruder within the precincts of their nests instantly becomes an object of suspicion and attack, and as the unlucky sparrow was flying towards the corner of the hospital, the bee assailed it, struck it with its sting, and the bird fell dead. On raising the skin from the bone, a small reddened spot on the fore part of the skull indicated the point at which the fatal weapon had entered.—*Drury; Tennent's Ceylon.*

XYLOMELUM PYRIFORME, the wooden pear tree of Australia, grows 15 to 20 feet high, and 6 to 8 feet in circumference. Its wood is of a dark colour, prettily marked, and suited for veneering.—*G. Bennett*, p. 322.

XYLOPHYLLA ANGUSTIFOLIA, one of the small Euphorbiaceæ, shrubs growing to the height of three feet; the colour of the flower is yellow and red.—*Riddell.*

XYLOPIA PARVIFOLIA. *L.* Nattou, SINGH. This lofty, straight tree grows in the southern parts of Ceylon at no great elevation, and abundant in the moist forests about the foot of the Travancore Ghats in the vicinity of Colatoorpalay; flowering in August. Flowers and bark are used by the Singhalese for chewing with their betel. X. aromatica is the Ethiopian pepper.—*Thwaites; Beddome, Fl. Sylv.*

XYLOTRECHUS QUADRIPES. *Chevrolat.* In the Peninsula of India, Borer is a name given to the larvæ of certain coleopterous beetles, which injure coffee trees. There are two, the white and red borer, and the chief of these is the X. quadripes. The large and rapid introduction of coffee-growing into Ceylon and India has shown that the plant is liable to be attacked by many enemies, and ignorance of that has been the cause of much loss. Coffee trees in Coorg have also been injured by the rot, a disease resulting from improper pruning. The rot attacks and decays the centre of the stem. In Coorg, when the tree is attacked by the borer, the leaves become yellow and droop. The insects are generally about the diameter of a small quill, are always confined to the wood, and never enter the bark until the larva has done its work, passed through the pupa stage, and is about to escape in the form of a beetle. The eggs are deposited by the females near the root of the tree, and the pupa bores a tunnel up the heart of the plant.—*Bidie on Coffee Planting.*

XYRIDACEÆ. *Lindley.* An order of plants with six species of Xyris in the E. Indies, viz. Indica, of all India; lappacea, of Coromandel; pauciflora, of both Peninsulas; robusta, of Sylhet; schœnoides, of Nepal. Properties unimportant.

XYRIS INDICA. *Linn.*

Dali doob, . . . BENG. | Kotsjelliti pullu, MALEAL.

A plant of China and India, with conspicuous yellow flowers on imbricated scaly heads, often seen in the Tenasserim paddy fields. It is said by Agardh to be used as a remedy in itch and leprosy. In Bengal it is valued for ringworm.—*Mason; Roxb.*

Y

Y is the 25th letter of the English alphabet; it derives its form from the Greek y, hence it is called in Spanish and French the Greek i. At the beginning of words and syllables it is a consonantal element; in the middle and end of words it is a vowel, being precisely the same sound as i. It is sounded as the English i long when accented, as in defy, rely; and as i short when unaccented, as in vanity, glory, synonymous. In a great number of English words derived from the Saxon, the Saxon letter g has become y, as gear into year; daeg into day; gealew into yellow. In Bengali, when uncompounded, its power is that of j, the reverse of the sound in the German alphabet, where j has the sound of y.

According to the laws which determine the change of sounds in the Turkish language, the change of y into t when it occurs at the end of a word is very frequent. Andkhoi, or Andakhud, or Andakhut is a Mongolian word meaning united happiness.—*Vambery, Bokhara*, p. 307.

YA. ARAB. The Oh! interjection of the Muhammadans, as Ya Karim, Oh Merciful! Ya Allah, Oh Lord! Ya Kabir, Oh Almighty!

YABOO, a small horse of the mountains near Kābul.

YADAVA, descendants of Yadu, the eldest son of Yayat and Devayani, a nomade pastoral

race of ancient India. The date of their arrival in India is unknown. At the time of Krishna's birth they were in the neighbourhood of Mathura, now called Muttra, a town on the banks of the river Jumna, and about 120 miles south of the site of the ancient city of Hastinapur. They dwelt on both sides of the river, on the western bank in the village of Vrindavana, and in the Gokula country on the opposite shore. They afterwards migrated to Dwaraka, on the western coast of the peninsula of Gujerat. Krishna belonged to this tribe, and he induced them to abandon the worship of Indra, and substitute the mountain Govardhana. Violence and disorder prevailed wherever the Yadava settled. Nearly all the tribe was destroyed at Prabhasa during a drunken affray, and others perished in Dwaraka when it was overwhelmed by a tidal wave.

Some of their branches have taken a prominent part in the history of Central Asia, in the valley of the Indus, in the countries now styled the Panjab, Rajputana, and Sind, known in ancient times as the Gete, the Yuti, and now represented by the Jat, Jut, Jet, or J'hut, and by the Yadu Bhatti of Jeysulmir, all dwelling along the valley of the Indus and to the east in Rajputana. A multiplicity of scattered facts and geographical distinctions warrant the belief that the Yadava race had dominion in Central Asia, and were again, as other races advanced, repelled upon India. Budh was an ancestor of a branch of the great Hindu people of a time prior to authentic history. He is traced up to Brahma, from whom he descends through Atri, Samudra, Chandra or Soma, and Vrihaspati. Budh is said to have married Ila, daughter of Ikshwaku, with whom, therefore, he was a contemporary, and the descendants of this union were, in succession, Pururava, Ayu or Yaou, Nohas or Nohus, and Yayat. Ayu or Yaou is claimed by the Tartar and Chinese genealogists as their great progenitor; from Yayat sprang three great lines, the Yadu, Puru, and Ura or Urvasa, from each of whom came many dynasties ruling on the Indus, in Hindustan, Assam, Ava, and China. The great Hya was a branch of the Yadu; and five members of it formed Panchalika or Panchaldesa, and the seed of Bajaswa at one time occupied all the countries on the Indus. Of the three lines, the Yadu, Puru, and Ura, the Yadu became the most illustrious. The descendants of Budh and Ila were known as the Chandravansa, Somavansa, or Induvansa, all of these terms meaning the Lunar race; but the fame of the Yadu eclipsed the prior designations, and throughout India the Lunar race came to be styled Yaduvansa. The Yadu held territories in Hindustan about Allahabad, but seemingly in small republican states, some of which were staked and lost at play. The relatives then fought for dominion, for 18 days, on the field of Kuru Khet. There was no battle of armies, but a series of single combats, with treacherous, cruel surprises, during which nearly all of the Yadu fell, and at the close, of those remaining, several, amongst whom Krishna was one, emigrated. The story is told in the Mahabharata. After the combats, the Yadu seem to have left the Ganges, to have been expelled from Dwaraka, to have crossed the Indus, passed Zabulisthan, and founded Ghazni and Samarcand, but to have swept back on the Indus into Gujerat and the Indian desert, from which they expelled the Langaha, Johya, Mohila, etc., and founded successfully Tannote, Derrawul, and Jeysulmir, in S. 1212, the present capital of the Bhatti, the lineal successors of Krishna. They are now known as the Bhatti of Jeysulmir, the Jharijah of Cutch Bhooj, the tribes occupying Kerrowlee and Subbulghur on the Chambal, and the Sumaitcha on the Chambal. The great Tuar tribe are also said to have been of Yadu origin. The Bhatti and Jharijah trace their descent from Budh and Krishna, and they may be said to occupy the Indian desert from the Sutlej to the ocean. Budh seems to have been a descendant of the first man, Brahma, and to have been the first emigrant from Sakadwipa or Scythia, into Hindustan, viz. about B.C. 2400. Between Budh and Krishna was a period of 1200 years. But Budh was deified by his descendants; and in Hindu mythology he is described as of Lunar origin, the son of Soma or Chandra or Indu, the moon, by Rohini. The date of the apotheosis of Budh is not known.

There seem to have been 56 clans of the Indu or Lunar race, but the Yadu was at one time the most illustrious of all the tribes of India, and became the patronymic of the descendants of Budh.

The annals of the Bhatti of Jeysulmir, which give the early history of their founder, mix up in a confused manner the cause of their being again driven back into India. Bhatti was the exile from Zabulisthan, and, as usual with the Rajput races on any such event in their annals, his name set aside the more ancient patronymic Yadu. In the Further Doab of the Panjab is a cluster of hills called Yadu-ka-dang. The Bhatti subdued all the tracts south of the Garrah, but their power has been greatly circumscribed since the arrival of the Rahtor. The Jharijah is the most important tribe of the Yadu race next to the Bhatti. Its history is similar.

The most common epithet of Krishna, or Heri, was Shama or Sama, from his dark complexion. Hence the Jharijah bore it as a patronymic, and the whole race were Sama-putia (children of Sama), whence the titular name, Sambus, of its princes. The modern Jharijah, who from circumstances has so mixed with the Muhammadans of Sind as to have forfeited all pretensions to purity of blood, partly in ignorance and partly to cover disgrace, say that the origin is from Sham or Syria, and of the stock of the Persian Jamshid; consequently Sham has been converted into Jam; which epithet designates one of the Jharijah petty governments, the Jam Raj. The Bhatti and the Jharijah are the most conspicuous of the Yadu race; but there are others who still bear the original title, of which the head is the prince of the petty state of Kerrowlee on the Chambal. This portion of the Yadu stock would appear never to have strayed far beyond the ancient limits of the Surasceni, around Mathura, their ancestral abode. They held the celebrated Biana; whence expelled, they established Kerrowlee west, and Subbulghur east of the Chambal. The tract under the latter, called Yaduvati, has been wrested from the family by Sindia. Sri Mathura is an independent fief of Kerrowlee, held by a junior branch.

The Yadu are scattered over Northern India; many chiefs of consequence amongst the Mahrattas are of this tribe, and there are eight sacs of the race, four of whom are,—the Yadu chief of Kerrowlee;

the Bhatti chief of Jeysulmir; the Jharijah chief of Cutch Bhooj; and the Sumaitcha Muhammadans in Sind. The rajas of Vijayanagar claimed to be of the Yadu tribe.

The Tuar, though acknowledged as a subdivision of the Yadu, is placed by the best genealogists as one of the 'thirty-six' royal Rajputs, a rank to which its celebrity justly entitles it. Colonel Tod supposes the Yadu to have been of Indo-Getic origin, as their habits of polyandrism would almost demonstrate, and as the best informed of the Jain sect assure us that Nemnath, the twenty-second Budha, was not only a Yadu, but the near kinsman of Krishna. He regards the Yadu to be the Yu-te, or ancient Gete of the Jaxartes, amongst whom, according to Professor Neumann, from Chinese authorities, one of the Shamanean sages sprang, 800 years before Christ. The term Nemeswar probably means the founder of this race, from Nema, foundation, and Iswara, lord. The traditions of the Jat claim the regions west of the Indus as the cradle of the race, and make them of Yadu extraction, thus corroborating the annals of the Yadu, which relate their migration from Zabulisthan. The Yadu of Jeysulmir, who ruled Zabulisthan and founded Ghazni, claim the Chaghtai as of their own Indu stock, a claim which Colonel Tod deems worthy of credit.—*Tod's Rajasthan*, i. pp. 85, 163.

YADAVA. SANSK. Jadon, HIND. A tribe of Rajput landlords and cultivators dwelling in considerable numbers about Agra and Mathura, in the Central Doab, and in Eastern Malwa. The raja of Kerrowlee is of this tribe. They profess to be descendants of Krishna. Some of their subdivisions are held in little esteem, and are termed Bagri by their neighbours; but they are spirited farmers, and rising in wealth and consideration.—*Wilson, Glossary.*

YADU, founder of the fifty-six tribes (Cha-pan-kula-Yadu) who obtained the universal sovereignty of India, and was descended from Yayat, the third son of Swayambhuma Manu, also called Vaivasvata Manu, or the man, lord of the earth, whose daughter Ella (Terra) was espoused by Budha (Mercury), son of Chandra (the Moon), whence the Yadu are styled Chandravansi, or children of the moon. Budha was therefore worshipped as the great ancestor, Pitriswara, of the Lunar race, and previous to the apotheosis of Krishna was adored by all the Yadu race. The principal shrine of Budha was at Dwaraka, where he still receives adoration as Budha Trivikrama, the triple energy, like the Hermes Triplex of Egypt.

YAFFA, a district of Yemen, surrounded by the Lahej, Sanaa, and the Hadramaut provinces, and reaching inland to the Jabl Yaffai mountains, which rise 6500 feet above the sea-level. The Yaffai tribe is the most powerful in Yemen.

YAGHI. TURK. Rebellious; a term applied to such chiefs as refuse their obedience and homage to government, even though they accompany this refusal with no violent act of rebellion. It is best rendered, perhaps, by the English word refractory. It is the corruption of the Arabic word baghi. Yaghistan is a term applied by General Sir C. M. MacGregor to all the country on the N.W. frontier of British India, which owns no chief. All the tribes from the Ushtarana on the south to the Chagharsai on the north are independent. He says there is not one who ever obeyed any one.—*Fraser's Khorasan; Lieut.-Col. MacGregor*, iii. p. 279.

YAHIA-bin-AHMAD-bin-ABDULLAH SIRHINDI or Sihrindi was the author of the Tarikh-i-Mubarak Shahi, which embraces the period from the time of Muhammad Sam, founder of the Ghori dynasty, till A.H. 852 (A.D. 1448). It contains all that is known of the Syud dynasty, and is copied verbatim by Nizam-ud-Din Ahmad in the Tabakat-i-Akbari.—*Elliot, Hist. of India.*

YAHIA - bin - SERAPION - bin - IBRAHIM was an eminent Syrian physician, said to have been born at Damascus, and supposed to have lived between A.D. 870? and 932. He finished in Syriac a complete view of the Greek system of medicine, particularly that of Galen, incorporating with it the principles and practice of the Arabs. Two works bearing his name were translated into Latin, and published in Venice in A.D. 1497, and again in 1550. He is often mentioned by the physician Rhazes, and Ali Abbas notices his brief account of the small-pox.

YA-HU. AR. Jehovah; Yo-hu, O He, God; He who is, He who exists.—*Catafago.*

YAHYA-bin-ABD-ul-LATIF-al-HASAINI of Kazwin, author of the Lubb-ut-Tawarikh, the Marrow of History, a General Asiatic Chronicle. He composed it A.D. 1541. He was a theologian and philosopher. He was patronized by Shah Tahmasp Saffavi. He died at Sikri A.H. 971. His eldest son, Mir Ghias-ud-Din Ali, held a command under the emperor Akbar, and his grandson, Nakib Khan, compiled the first portion of the Tarikh-i-Alfi and translated the Mahabharata.

YAIBANE, of the teak forests of Pegu, cultivate the mulberry tree, Morus Indicus, for feeding silkworms, which they rear, the hills being better adapted for the growth of the plant than the plains, besides which their plantations are not exposed to the trespass of cattle. The silk they produce appears to be of a coarse kind, more owing to the imperfect way in which it is wound off than to any fault of the cocoon. They are a most industrious people, young and old of both sexes being employed without interruption in some part of the process. The cocoons seem to be large and very fine, and are produced at the rate of 2000 for one rupee, and the silk when wound off is valued at five rupees per viss. The Yaibane are prosperous, with the reputation of being possessed of considerable hidden wealth, which for security they bury in the forest.—*Selec. Records, Govt. of India, Foreign Dept.*, No. ix. p. 13.

YAILA. TURK. Pasture lands.

YAILM WANLOO, Teling hawkers. These people follow the trade of clerks, painters, and indeed any but an occupation involving manual labour.

YAJANA. SANSK. A sacrifice, or its performance, as the offering of libations of soma juice or of butter. The five great sacrifices are named Brahma-yajna, sacred study; Pitri-yajna, libations to the manes; Deva-yajna, burnt-offerings to the gods; Bali-yajna, offerings to all creatures; Nri-yajna, hospitality. Later additions are Prajapati-yajna, propagation of offspring, and Satya-yajna, observance of truth. Yajana, from the Sanskrit Yaga, a burnt-offering, formerly made on a grand scale by kings. Yagna, from Yaja, worship of burnt sacrifices. Yagnaha, from Yagna, a sacrifice, and Han, to destroy.

Yajana Yajana, corruptly Jajan Jajan, offering prayers.

Yajna pasu, an animal offered in sacrifice.

Yajna pavita, the sacred cord or zonar worn by the Brahman, Kshatriya, Vaisya, and artisan Hindus.

Yajna-sala, the sacrificial hall of a Hindu temple.

YAJNA WALKYA, surnamed Vajasaneya, a Hindu learned man who is supposed to have written the White Yajur Veda, the Sathapatha Brahmana, the Brihad Aranyaka, and the Law Code called Yajna Walkya Smriti, which is later than Menu. He was a disciple of Bashkali and of Vaisampayana. He was at the court of Janika, king of Videha and father of Sita. He was a religious reformer, and the schism he effected gave rise to the writing of the White Yajur Veda, which he compiled. His authorship of the other books is very doubtful, but the Smriti, with its commentary by Mitakshara, is in authority inferior only to that of Menu, and is in force all over India except Bengal. Its date is supposed to be the 2d century A.D. He is described as an ascetic pupil of Vaisampayana, who officiated as one of the Hotri, and cooked the sacrifice at the great rajasaya of Yudishtra. He arranged the ancient Mantra and Brahmana, the Vajasaneya Sanhita, and the Satapatha Brahmana in their present form.—*Dowson.*

YAJUJ and Majuj of the Arab geographers is Gog and Magog of Ezekiel. See Gog.

YAJUR. SANSK. The name of one of the Vedas, religious books of the Hindus. It is the second of the four scriptural authorities of the Hindus, and is the sacrificial Veda. The Taittiriya, or the Black Yajur Veda, contains more of prayers to serpents and serpent-worship than the Rig Veda. In the Sanhita of this Veda are prayers to the Sarpa, who are addressed as inhabiting the heavens, the skies, the rays of the sun, the waters, the vegetables, etc. See Veda.

YAK, Bos poephagus, or B. grunniens, or Peophagus grunniens, is still in a wild state, but has been largely domesticated. The general aspect of the yak is distinctly bisontine, and it carries its head low, like the rest of the sub-group. The yak is indigenous to High Tibet, and especially to Eastern Tibet, where they are still tolerably numerous in the wild state. It is extensively domesticated, and is the ordinary tame cattle of that elevated portion of the globe. The wild animal is known as the Dong or Ban chour. In the Western Himalayas, the wild yak is called Brong or Dong, and the female hBrong-hBri, which is commonly pronounced Dond-di.

Vigne was informed that the yak is found wild on the northern slopes of the Himalaya, where they descend on Yarkand. The Messrs. Schlagentweit state that in Western Tibet, particularly in Ladakh, there are no more of the yak in a wild state at present.

Amongst all quadruped animals the yak is found at the greatest height; it stands best the cold of the Snowy Mountains, and is least affected by the rarefied air. But at the same time the range of temperature in which a yak can live is very limited; the real yak can scarcely exist in summer at heights of 8000 feet. The Schlagentweits found large herds of wild yak, from 30 to 40, on heights of 18,600 to 18,900 English feet; and on one occasion they traced them even as high as 19,300 feet,—a remarkable elevation, as it is very considerably above the limits of vegetation, and even more than 1000 feet above the snow line. Hermann and Robert Schlagentweit frequently found wild yak on both sides of the range which separates the Indus from the Sutlej, near the origin of the Indus and near the environs of Gaarto, but the greatest number of them was at the foot of the Kara-korum range, as well as at the foot of the Kouen Lun in Turkestan. It is the largest native animal of Tibet. It is, when wild, horridly fierce, falling on the hunter with horns and chest, and if he rasp with his tongue it is so rough as to scrape the flesh from the bones. It is hunted by large dogs, and shot with a blunderbuss. The wild yak does not come so far south as Rupshu, but a few are met with during winter and early spring on the Nubra ranges; they migrate, however, to the loftier slopes of the Kara-korum before the end of April. The yak wanders about singly or in small herds, preferring secluded valleys to open hillsides, passing the day among the snow, where, like deer and bears, it may often be seen at mid-day stretched out at full length asleep. The prevailing colour of the wild yak is black, with a greyish tinge on the head. In its native state it is shy and timid, and the same to some degree when domesticated. In winter flocks graze below 8000 feet, on account of the great quantity of snow above that height; in summer they find pasturage as high as 17,000 feet, consisting of grass and small tufted carices, on which they browse with avidity.

Its favourite pasturages are ascertained, and in the midst of these the hunters throw up circular stone enclosures a few yards apart, the hunter taking up his position in one of them. When a yak is within shot, the hunter fires, and instantly quits his enclosure for another; for so soon as the animal hears the shot, he, whether he has been hit or not, guided by the smoke of the discharge, rushes furiously on the enclosure, and commences knocking it to pieces. When the hunter gets another shot at him he retires again from his shelter to a fresh enclosure, and so on till he has killed his game. The ordinary size of the dong is four times that of the domestic yak; it is black all over, having occasionally a white streak in the forehead. The horns of a full-grown bull are said to be three feet long. It is used by grandees of Tibet at marriages and other feasts, when it is filled with strong drink, and handed round to the company. Nothing more commendatory of the host's joviality can be said, than that 'he regaled his guest out of the dong's horn.' The horns so used are finely polished, and mounted with silver or gold and precious stones.

It is common in Tibetan gumpas (Lamaserais) to see a stuffed dong standing in front of the image of Maha Kali, at whose shrine the animal is thus figuratively sacrificed; axes and other instruments of sacrifice are ranged around the image. Strange that Buddhists should preserve this feature of Hinduism in their places of worship.

The *domesticated yak* now takes the place of its half-breed, called zho. It is the chief beast of burden in Rupshu. It is often handsome, and a true bison in appearance. It is invaluable to the mountaineers of Northern India from its strength

and hardiness, accomplishing at a slow pace 20 miles a day, bearing either two bags of salt or rice, or four to six planks of pine wood slung in pairs along either flank. Their ears are generally pierced and ornamented with a tuft of scarlet worsted; they have large and beautiful eyes, long, silky black hair, and bushy tails. Black is their prevailing colour, but red, dun, party-coloured, and white are common.

Much of the wealth of the people in East Nepal consists in its rich milk curd, eaten either fresh or dried, or powdered into a kind of meal. The hair is spun into ropes, and woven into a covering for their tents, which is quite pervious to wind and rain, though in the dry climate of Tibet this is of little consequence. The bushy tail forms the well-known chauri standard or fly-flapper of the plains of India, and its hair is greatly esteemed by the women of the plains to add to their back hair. The female drops one calf in April, and the young yak are very full of gambols, tearing up and down the steep grassy and rocky slopes. Their flesh is delicious, much richer and more juicy than common meat; that of the older yak is sliced and dried in the sun, to form jerked meat, called schat-t-chew, dried meat, which is eaten raw, and is a palatable food. The yak loves steep places, delighting to scramble among rocks, and to sun its black hide perched on the glacial boulders which strew the Wallanchoo flat, and on which these animals always sleep. Their average value is from twenty to thirty rupees. The yak, though indifferent to ice and snow, cannot endure hunger so long as the sheep. Neither can it bear damp heat. The yak is ridden, and its pace is easy.

Yak are bred in Bussahir, whence they are sent for sale. In Spiti the people plough with it and carry loads; it furnishes their milk, and hair to make ropes. In the severest weather this animal appears to enjoy itself in the snow, and is often to be seen with icicles of several inches in length hanging to its nose, and a foot or more of ice hanging to the hair of its neck and shoulders. Long hairs hang over the eyes, and prevent their freezing. In Spiti they have also the ghoont, asses, sheep, goats, dogs, and cats. The Tibetan dzo, called chubu in the Himalaya, also zho and zo, is a mixed breed or hybrid from the bull yak or Bos grunniens and the Indian zebu cow. In Tibet, the Sauh is a cross between cow and yak; Sauh yak, produce of cow by yak bull; Ba sauh, produce of female yak by bull. Ya-niu, CHIN.; Sura-gai, HIND.; Yakmo, TIB., the female. The hybrid between the yak and the Indian cow is very fertile. The brothers Schlagentweit had occasion to see and examine the offspring of the hybrid as far as to the seventh generation, neither much altered nor deteriorated; and were informed that there was never found any limit as to the number of generations.

The yak even in the valley of Kashmir rapidly degenerates. The heat and insects are evidently its greatest enemies in the tame as well as wild state; and none of these animals, not even the goats, seem to care for the luxuriant vegetation of the lowlands, preferring whatever resembles their Tartaric furze and bent to the rich clover and grasses of Kashmir.

Steady and sure-footed, moving with a slow, easy, wriggling gait, rising over or descending obstructions with very little jar. They are led by a rope attached to a wood ring which passes through the nostrils.—*Adams; Vigne's Travels; Cunningham's Ladakh; Hook. Him. Journ.; Schlagentweit.*

YAKKA. BENG., HIND. A carriage drawn by one bullock, from Ek, one.

YAKKA. The malignant spirits of Ceylon are the Yakka, who are the authors of indefinite evil; and the Singhalese have a demon or Sanne for each form of disease, who is supposed to be its direct agent and inflicter, and who is accordingly invoked for its removal; and others, who delight in the miseries of mankind, are to be propitiated before the arrival of any event over which their pernicious influence might otherwise prevail. Hence, on every domestic occurrence, as well as every domestic calamity, the services of the Kattadia or devil-priests are to be sought, and their ceremonies performed, generally with observances so barbarous as to be the most revolting evidence still extant of the uncivilised habits of the Singhalese. Especially in cases of sickness and danger, the assistance of the devil-dancer is implicitly relied on; an altar, decorated with garlands, is erected within sight of the patient, and on this an animal, frequently a cock, is to be sacrificed for his recovery. Another kind of demon-worship in Ceylon is a debased form of Hinduism, where the priest or kapua is the performer.—*Tennent's Christianity in Ceylon*, p. 232; *Wheeler's History of India*, i. p. 30.

YAKKA, a race formerly occupying the interior of Ceylon. The Yakka, previous to the arrival of Gautama, were demon-worshippers; neither was their conversion general.—*Forbes' Ceylon*, ii. 82.

YAKONIN, in Japan, generally an officer with two swords; a Government officer of the police or customhouse; a paid officer of the Japanese Government.—*Hodgson's Nagasaki*, p. 21.

YAKSHA, in Hindu mythology, a kind of demigods, attendants on Kuvera, the god of wealth, and employed by him in the care of his gardens, etc., situated on Mount Kailasa. The Yaksha demigods were supposed to be much courted by the Apsarasas nymphs of Indra's heaven, but that they had wives of their own is clear from the Meghaduta. Their name is said to be derived from Yaksha, to worship, either because they worship Kuvera, or are themselves worshipped by men. The Yakshini female attends on Kuvera and Durga, but often holds intercourse with mortals. As with the brownies of Scotland, they are called Punya jana, good people, but they are sometimes imps of evil.—*Williams' Nala*, p. 203; *Dowson*.

YAKSHYO, in Ceylon, is a class of demigods who are supposed to inhabit the waters and dwell on the sides of Mount Meru, and who are distinguished not only for gentleness and benevolence, but even by a veneration for Buddha, who, in one of his earlier transmigrations, was himself born under the form of a Yakshyo.

YALE, ELIHU, became Governor of Madras about 1682. He was the father of the founder of Yale College, U.S.

YALI. TAM. In Sanskrit, Sarab'ha, a fabulous animal with the body of a lion, the trunk and tusks of an elephant, a sword or mace over its back, and a cross or flower under its feet. A monster of the lion type trampling on an elephant,

an architectural feature in the sacred buildings of Southern India.

YALKAMA, a name of Balkees, queen of Sheba. See Balkees.

YAM, Kan-chu and Chu-yu, CHIN., are the tubers of various species of Dioscorea, cultivated in nearly all tropical countries as important esculents. The tubers abound in farinaceous matter, and often reach a large size, weighing from 30 to 40 lbs. Their culture is considered to have spread from S.E. Asia and the East Indian Islands, where at present Dioscorea globosa and Dioscorea alata, *L.*, hold the first and second places, D. purpurea and D. rubella the third and fourth. Other edible species are—D. aculeata, atropurpurea, acutangula, anguina, bulbifera, belophylla, cirrhosa, fasciculata, lucida, pentaphylla, pulchella, sativa, sagittata, triphylla, tomentosa, transversa, verticillata, versicolor.

In the West Indies there are several varieties having distinctive names, according to quality, colour, etc. Their Indian yam is considered the most farinaceous and delicate in its texture, resembling in size the potato; most of the other sorts are coarse, but still very nutritive and useful. Common yam, D. sativa, is indigenous to the Eastern Islands and West Indies. The Guinea yam, D. aculeata, is a native of the east. The Barbadoes or winged yam, D. alata? has a widely-extended range, being common to India, Java, and Brazil. The yam species are climbing plants with handsome foliage, of the simplest culture; they succeed well in any light, rich, or sandy soil, and are readily increased by dividing the tuberous roots. If not bruised, they will keep, well packed in ashes, for nine and twelve months. From yams of all sorts, and particularly the buck yam, starch is easily prepared and of excellent quality.

Yams and sweet potatoes thrive well in the northern parts of Australia; the former constitute the chief article of vegetable food used by the natives. Dressed in milk or mashed, they are a delicacy. An acre of land is capable of producing 4½ tons of yams and the same quantity of sweet potatoes within the twelve months, or 9 tons per acre for both, being nearly as much as the return obtained in the cultivation of potatoes. The kidney-rooted yam, D. pentaphylla, is indigenous to the Polynesian Islands, and is sometimes cultivated for its roots. It is called Kawan in the Fiji Islands. D. bulbifera, a native of the Archipelago, is also abundantly naturalized in the Polynesian Islands, but is not considered edible. Two kinds in the Tartar country are of a remarkably fine flavour, one weighing as much as 18 lbs., the other 8 lbs. In the Fiji Islands, some of the yams, of which there are upwards of 50 varieties, grow to the enormous size of 50 to 80 lbs. in weight. Their general average, however, is from 2 to 8 lbs. Captain Hill states that the New Zealand yam, if boiled, is heavy and wet; cut into slices after boiling, and then fried with a little butter nearly dry, decidedly good, not exactly mealy, but nearly so.—*Smith; Voigt; Simmonds.*

YAM. CHIN. A post house. In the time of the embassy sent by Shah Rukh, every yam was situated opposite to a city or town, and in the intervals between the yam were many kargu and kidifu. The word kargu is applied to a tower of some 60 cubits in height, where two men are constantly on duty. The tower was so placed that the next kargu was in sight from it, and when any event of importance occurred, like the approach of an enemy's army, the men on watch immediately lighted a fire, and this being seen from the next kargu, they made haste to light another. A double system of horse and foot posts was also found by Ibn Batuta established in India in A.D. 1333. The posts of Timur are noticed by Clavijo (p. 105); and Baber describes his own post between Agra and Kābul, using the word yam, but adding that it was called in India dak-choki, the term in use in all India to this day. Pautheir thinks yam to have been taken from the Chinese yi-ma, horse-post. Burnes was told of the continued existence of both post and fire beacons between Yarkand and Pekin. The distance is more than five months' journey as usually travelled, but an express went in thirty-five days, and under very great emergency in fifteen. —*Marc. Pol.* p. 335; *Erskine's Baber*, p. 393; *Yule, Cathay*, i. p. 138.

YAMA. SANSK. He who is free from the influence of the passions, moral duties, five acts of restraint or self-government, viz. Ahinsa, freedom from any wish to injure others: Satya, truth in words and deeds; Asteya, honesty and integrity; Brahmacharya, chastity; and Apara-griha, disinterestedness.

YAMA. JAP. A hill, as Fusi Yama, O'Yama. Yama-taka and san or zan are the terms for the different classes of mountains.—*Sir J. E. Reed.*

YAMA, in Hindu mythology son of Vaivasvata and Saranyu, is called in the Persian legend Yima, and later Jamshid. Yama or Dharma-raja resembles both the Grecian Pluto, the king of the lower regions, and Minos, judge of departed souls, and in Hindu mythology he is the regent of the south or lower division of the world, mythologically called Patala. Yama is described as of a green colour, with red garments, having a crown on his head, his eyes inflamed, and sitting on a buffalo, with a club and pasha or noose in his hands; but as Dharma-raja he is described as of a divine countenance, mild and benevolent. The virtuous only see the latter; the wicked are judged by Yama. If the dead have been virtuous, they ascend to a place of happiness; if wicked, they are sent to a particular hell, to undergo the punishment appointed for their especial crimes. Yama is called Srad'ha deva, or lord of the obsequies, and presides over the ceremonies of the Srad'ha. At the time of offering the oblations to the manes of deceased ancestors, he is invoked by the priest under several names, of which Mr. Colebrooke has enumerated fourteen. The priest thus addresses him: 'Salutation to Yama! salutation to Dharma-raja! to Antaka, the Destroyer! to Vaivaswata, or Child of the Sun! to Kala, Time! to the Slayer of all Beings! to Andhambara or Yama,' etc. etc. Hindus make daily oblations of water to Yama. The second day of the month Kartik is sacred to him and his sister, the river goddess Yamuna or Jumna, who entertained him on that day; in consequence of which an annual festival is held, in which sisters entertain their brothers. On this occasion an image of him of clay is made and worshipped, and then thrown into the river. He is also worshipped on the 14th day of the dark part of the month Aswina. Some of the other names of

Yama are Pitripati, or lord of the Pitri; Andhambara, from a wood from which fire is produced by attrition; and Dandadhara, he who has the rod of punishment. The name of Yama occurs frequently in the sacrificial ceremonies of the Hindus, oblations and invocations to him forming a portion of several of those ceremonies. Minos of the Greeks has been supposed the same with Menu; with whom, especially with the 7th, Satyavrata, Yama also agrees in character as well as in name; both being called Vaivaswata, or offspring of the sun, and Srad'ha deva, or lord of the Srad ha. Srad'ha is the ceremonial oblation in honour of deceased ancestors, which obsequies to the dii manes are attended with feasting and various observances. Mr. Wilford believes Yama or Pluto to be the same with Serapis; deriving the latter name from a compound Sanskrit word implying thirst of blood. The sun, in Bhadra, had the title of Yama; but the Egyptians gave that of Pluto, says Porphyry, to the great luminary near the winter solstice. Yama, the regent of hell, according to the Puranas, has two dogs; one of them named Cerbura, or varied; the other Syama, or black; the first is also called Trisiras, or with three heads, and has several other epithets signifying stained or spotted. Cerbura is indubitably the Cerberus of the Greeks. The dragon of Serapis is supposed to be the Seshnaga, which is described as in the infernal regions by the author of the Bhagavat. Yama, as the god of justice, presides over the different Naraka or hells. He is son of Surya, the sun. As the judge of departed souls, he is identified with death. His abode is in the infernal city of Yamapura, whither the Hindus believe that a departed soul repairs, and, receiving a just sentence from Yama, ascends to Swarga, or descends to Naraka, or assumes on earth the form of some animal, according to its deserts. Yama rides upon a buffalo as his vahan, and is armed with a ponderous mace.—*Oriental Linguistic Studies; As. Res.* iii. p. 409; *Moor*, p. 309; *Williams' Nala*, p. 205; *Hind. Theat.* ii. p. 62.

YAMADANSHTRA, SANSK., is literally Yama's teeth; the last eight days of Aswin and the whole of Kartik, considered a period of general sickness. Yama-dula, Yama's messengers.

YAMADWITYA, the second of the light half of Kartik, when brothers and sisters exchange gifts in honour of the attachment between Yama and his sister Yami. See Yama.

YAMALAYA. SANSK. From Yama, and Alaya, a dwelling. Yama-locum; the distance from the world to the Yama-locum is 99,000 yojna, or 1,485,000 miles.

YAMAPURI, of the Hindus, is the general rendezvous of the souls of the departed, from which they proceed to Dharmapuri in a body, with a proper guard composed of the Yama-dula, servants of Yama. The depot for the souls after death in Malacca or Maha Lanca.—*As. Res.* x. p. 142. See Dip-dan.

YAMBRE, also called Kuru, silver ingots used in trade in Central Asia.—*Caley.*

YAMBU or Yambu-ul-Bahr, the seaport of Medina, the entrance of the harbour being in lat. 24° 4′ 30″ N., and long. 38° 1′ E. It is the Zambia of Ptolemy. Here the sultan of Turkey's dominion is supposed to begin, while that of the pasha of Egypt terminates. The population is the most bigoted and quarrelsome in Hejaz.—*Findlay.*

YAMMAMBO, in Japan, austere hermits; literally, mountain soldiers.

YAMUN, generally called 'offices' of the mandarins; the official residence of all Chinese officials. The residence and public office of a mandarin.

YAMUNA or the Jumna river of Hindustan, in Hindu mythology is personified as the daughter of Surya or the sun, and sister of Yama; its other name being Kalindi, the sun, from the Kalindi mountain. To Yama, who is the son of the sun, the second day following the Amavus or ides of Kartika is held sacred; it is called the Bhratri divitya or the brothers, because the river goddess Yamuna on this day entertained her brother (bhratri) Yama, and is therefore consecrated to fraternal affection. At the hour of curfew, 'gaodaluk,' when the cattle return from the fields, the cow is worshipped, the herd having been previously tended. From this ceremony no rank is exempted; on the preceding day, dedicated to Krishna, prince and peasant all become pastoral attendants on the cow, as the form of Prithivi, or the earth. The Bhagavat relates that Krishna's mortal parents were Vasudeva (meaning 'the giver of wealth) and Devaki; mentions a miraculous escape of the infant over the Yamuna conveyed by his father, and protected by Sesha or immortality; the guards placed by Kansa over his pregnant sister having failed in their vigilance, Kansa, enraged, ordered all newly-born infants to be slain; but Krishna escaped his various snares, one of which was sending a woman named Patnia with a poisoned nipple to nurse him, and he was fostered by an honest herdsman named Ananda or happy.

YAMUT, a Turkoman race settled beyond the river Attrak, near the shores of the Caspian Sea, and between this and Khiva, consisting of 25,000 families. They are the least ugly of the Turkoman tribes. The Goklan, on the banks of the Gurghan and the Attrak, between Astrabad and the Attrak, consist of 12,000 families.

The Tekke, who are separated from the Kurd by a chain of mountains which extend from the sources of the Gurghan and the Attrak, near Sharaks, consist of 35,000 families. They migrate between the sources of the Attrak and the town of Merv.

YANADI, a race who dwell in the forests of the Sriharikottah muttah of the Chingleput collectorate. They are in a low state of civilisation, and hold little or no intercourse with their more civilised neighbours. Until the middle of the 19th century, their ordinary avocations were the gathering of the wild products of the forest, which the officers of the Madras Government bought from them at rates lower than the ordinary market prices, and paid them in kind with grain and clothes. Latterly, however, a few on the outskirts have taken to charcoal-burning and wood-felling, and they are now also paid partly in money, changes which all bring them more in contact with settled people around them. An effort was made in 1855 to induce them to engage in agriculture. In 1857, Government established a school for their children, for each of whom an allowance in grain is given. Government paid to them about Rs. 1800 a year. They are about 500 in number. Their ordinary locality was in the very depths of the forests,

beneath the shade of pending branches. A few are of a dark bamboo colour, but ordinarily they are black. The men are not good-looking, but the women are positively ugly, though decently clad. The men wear only the langoti. They have clear skins, but are largely troubled with elephantiasis, for they suffer much from fever. They seem to use warm earth baths in fever. Their food consists of wild fruits and roots, particularly those of the Kanduri, HIND. (Bryonia grandis, *Linn.*), a few wild varieties of yams, and the leaves of Capparis horrida, rice, the wild bean, Canavalia virosa, molluscs, fish and flesh of every kind. They hunt with the bow and fish by torch-light. They are polygamists, have up to four or even seven children. They bury or burn their dead, and pour libations on the grave. The men average 5 feet 4¾ inches in height and 100 lbs. in weight. The women average 4 feet 6 inches in height and 82 lbs. in weight. They have little intelligence, cannot reckon up to ten, converse but little with each other, and are more taciturn with strangers, whose very presence even alarms them. The language they speak is said to be Tamil; and a similar race, it is stated, occupy the neighbouring forests on the hills at Naglawaram, and others are spread through Nellore, N. Arcot, and Cuddapah. Indeed, the Yanadi in 1867, in the Nellore district, were estimated by Dr. Lloyd at 20,000; and the residents inland are more robust than those of the Sriharikottah jungles. The Collector of Chingleput, writing in 1835 to the Madras Board of Revenue, mentioned their numbers then were — adult men 49, boys 41; adult women 69, girls 40; total, 199. The Madras Government has continuously endeavoured to improve their condition, and to this end Dr. Shortt made large exertions, between 1860 and 1870, and in the latter year about 40 of the Yanadi were employed at Vasarapad, near the snake temples, of which they are the priests.—*Proc. Madr. Govt.*, 1867; *Dr. Shortt.*

YANAON or Yanam, a town in lat. 16° 44′ 10″ N., and long. 82° 15′ 5″ E., 24 miles S.E. of Rajamundry, built on the spot where the river of Coringa and the Godavery separate. It is a French territory of 8147 acres, surrounded by British lands.

YANDABU or Yendaboo, a town in Independent Burma, situated on the right bank of the Irawadi (Irrawaddy) river, lat. 21° 38′ N., and long. 95° 4′ E., about 40 miles west of Mandalay. The treaty of peace which concluded the first Burmese war was signed here on the 26th February 1826.—*Imp. Gaz.*

YANG. The Shan word for Karen is Yang, softened into the Burmese Yen; hence several Karen tribes with Yen as their tribal appellation.

YANG. In Chinese mythological history, the male creative power, from which and the female Yin the universe primeval sprang. See Yin and Yang.

YANG-CHEN, a great scholar of the time of the Han dynasty. He was an officer of high rank, but lived and died in poverty, a spotless official. The Yang family proudly worship in his ancestral hall.—*Giles*, p. 40.

YANGI-HISSAR, a district of Kashgar, along the river Shah-nas, N.W. of Yarkand.

YANGMAI. CHIN. A scarlet fruit, not unlike an arbutus or strawberry, but having a stone like a plum in the centre.

YANG-TZE-KIANG is the largest of the Chinese rivers. The entrance is very wide, but divided into two channels by the large island of Tsung-Min on the north. On the shore of its southern entrance is the town of Wosung. The Yang-tze-kiang river is called by the Chinese the Great River, also the Girdle of China; it traverses the whole of the centre of the empire, rolling its flood of water to the sea through the richest and most fertile part of the country. There is no river in the world which has on its banks so numerous a population, amounting at least to 100,000,000 of people, who are sustained by its waters in the pursuits of commerce and agriculture. There are more than 100 cities of the first, second, and third classes, and 200 towns and villages, which could be approached directly from its water-way. From its origin in Tibet to its outlet at the sea, its course is about 3000 miles, the points being distant in a direct line 1850 miles, and the basin drained by its channel nearly 800,000 square miles. Persons engaged in every variety of trade resort to Hankow, from Mongolia to Tibet and Sze-chuen, bring their wheat, rice, dried and salted vegetables of every kind, bamboo sprouts, horses, sheep, furs, skins, coal, lead, jade or nephrite, gold in large quantities, rhubarb, musk, wax, and various drugs of northern growth. Unlike the Ganges, the whole volume of water does not lose itself in tidal creeks, but pours out into the Pacific in one vast stream 60 miles wide. By a ship which has once made the trip pilots are not required. Rising in the snows of Kouen Lun, it enters China proper not 300 miles from Saddiya in the province of Assam. Up to this point it is believed to be navigable by boats, for vast rafts of timber laden with hill produce pass down. Down the 1100 miles from I-Chang to Shanghai, the river rolls through provinces of virgin fertility, whence proceed teas and silks, which find their way to Canton and Shanghai. The plain of the Yang-tze-kiang was the garden of China. From it there runs north to Tien-tsin the Grand Canal, up which used to float the whole supplies of Northern China. At a point higher up, the great trunk road from Pekin to Canton crosses the river. Where the Yang-tze-kiang flows past the Poyang Lake it receives several navigable streams which run through the Black Tea districts to the west, while those from the eastward open up the Green Tea districts. The Poyang Lake and Kiu-kiang, the chief town, are the centre of an extensive network of river and canal communication. What Kiu-kiang is at this point, Hankow is still more 200 miles farther up. It stands on high banks at the junction of the Han and Yang-tze rivers, a little below the Tungting Lake. The rise and fall in the Yang-tze-kiang averages about 10 feet. The Tibetan district, the great plateau of Mid Asia, is centrical ethnically as well as geographically to all S.E. Asia and to Asianesia, abuts on the west on the eastern extremity of the primitive Iranian region, and is connected with China and all the sea basins on the east of Asia by means of the Yang-tze-kiang and the Hoang-ho.

The Yang-tze-kiang forms, with the Hoang-ho, a twin basin, to which the most advanced and powerful eastern civilisation owes its development. The Yang-tze-kiang is connected on the

west with the twin basins of the Salwin and Irawadi, which are themselves connected inland with the Tibetan district, and on the S. and E. to the Indian oceanic basin. It is undoubtedly one of the finest rivers in the world. It takes its rise in the mountains of Tibet, and, after traversing the Koko-Nor region, enters China at the province of Kan-su; it then leaves it again to water the sandy plains at the foot of the Alechan mountains, surrounds the country of Ortous, and, after having watered China from south to north, and then from west so east, goes on to throw itself into the Yellow Sea. The waters are pure and beautiful at their source, and only assume their yellow tint after passing the Alechan and the Ortous. The river rises almost always to the level of the country through which it flows; and to this is to be attributed the disastrous inundations which it occasions. These floods are very fatal to China, but they are of little consequence to the nomadic Tartars, who have only to strike their tents and move off elsewhere. — *American Expedition to Japan*, p. 166; *Local Newspapers.*

YANTRA, Yantri, or Jantri, a Hindu almanac, a dial, altitude and azimuth instruments.

Raj Yantra is used for ascertaining the altitude of the heavenly bodies and the longitude of places, referred to Lucknow (secular capital) and to Ajodhya (religious capital) as circles of first meridian. If the longitude of places, having Lucknow as a first meridian, are to be ascertained, then the circle marked 26° 51′, being the altitude of Lucknow, must be uppermost, and so for Ajodhya.

Dhruba Yantra is used to find the direction of the poles. The instrument consists of a pointer, whose length is equal to the radius of the circle through whose centre it passes at right angles. The circle is divided into 60 equal parts. It is so placed at noon that the shadow of the pointer may fall at the 45th part.

Pratod Yantra is used to measure time. This is an hour rod, whose horizontal section is a regular octagon, and the breadth of whose base is to the breadth of its top as 3 to 2. The rod is about 27 inches long, having near the top a groove on each of its sides to receive a stick attached to it, which is about 9 inches long. The length of the day varies from 26 to 33 dunda. The instrument is used thus: The length of the day being known, the little stick is made to pass through the groove marked with the length in dunda. The rod is then made to stand perpendicular to the horizon, facing the sun, so that the shadow may fall on the side which marks the length of the day. Before noon the shadows show the hours past, and after noon the hours remaining to sunset.

Khapru Kidhup-ghari, a universal sun-dial. The wire from south to north, representing the axis of the earth, is in the place of the gnomon of the common sun-dial; and the shadow cast by this wire on the concave semi-cylindrical surface, gives the time of day to within 5 minutes for a day of 12 hours. The graduated arc to the north is the brass meridian upon which the dial is elevated according to the latitude of the place. The shadow cast from the transverse wire in the plane of the equator tells the declination of the sun, and hence the month of the year. The vertical slip of brass to the south will give the time of day in a high latitude, where the sun rises at three and sets at nine. The dial is graduated for 12 hours, according to the European system, and likewise for 30 ghurees (equal to 12 hours), according to the Hindu system. The instrument is levelled by turning the foot screws until the threads of the two plummets respectively touch the edge of lines which are marked in the adjacent bars. This sun-dial is known as the Khapru kidhup-ghari, or tile sun time, from its resemblance to the shape of a tile.

Maun Yantra.—Equatorial altitude and azimuth instrument, used by Hindu astronomers. The mode of using it is described in Herschel's Astronomy, para. 182.—*Government of Oudh.*

YANYSHAHR, a town of 8000 houses, lies at about 47 miles S. of Kashgar. It is surrounded by a stone wall, has two gates, and two caravansaris. — *Russians in Central Asia, Capt. Valikhanof and M. Vemukof*, p. 154.

YAO. All the ancient traditions of the Chinese refer to their emigrations from the west. Their first settlement was in the northern portion of Chi-li, the province in which the present capital, Pekin, is situated. The first portion of authentic Chinese history tells us that Yao or Yaou, who reigned about B.C. 2330, had his capital at the new district city of Tsin-chow, situated about 100 miles only to the south of the present capital, Pekin. From this most ancient location the people spread gradually westward and southward, thus steadily increasing its territory. The usual course of the process was, first, colonization of the new regions and displacement from them of whatever aboriginal inhabitants were found; and afterwards political incorporation with the older territory. At times, however, the process was reversed, and military conquest of the aboriginals preceded their displacement by an industrial occupation of their lands.

YARKAND is the most populous and extensive of all the districts of Kashgaria, the souls numbering 40,000. Its capital, Yarkand, the largest town of Eastern Turkestan, has populous suburbs, its principal industry being the leather trade. Yarkand stands on an open plain between the branches of the Yarkand river. The foreigners in it from Badakhshan carry on a trade in Kashmir slaves, and the Balti tribes from Little Tibet carry on all the work of labourers, drivers, and carriers. Goitre is very frequently met with in Yarkand, the natives of which attribute its prevalence to the property of the water; and it is also met with in Khokand. Gold is washed out at the Karja settlements; the inhabitants pay their dues in this metal, and dispose of it to private individuals. Sulphur, sal-ammoniac, alum, and saltpetre occur. The volcanic soil around the town of Kuchi is particularly rich in these materials. Sulphur is obtained at Ush-Turfan, in the Yarkand district, and saltpetre at Ush-Turfan and at Sairam, 110 miles farther east. Salt mines are worked in the Yan-chi Shan mountains, east of Aksu. Among the more remarkable mineral productions of Turkestan must be included the jade, which is highly esteemed in China under the name of Yu. The nephrite found here is of two kinds; that from the mountains, called by the natives Loncha or Bishbargan, which is found in the mountains of Mirdjai and Sutash, 74 miles from Yarkand; and the second obtained in the river

Ulgunkash (pronounced Yurunkash by the Chinese), under the special supervision of a Chinese officer.

The Khokand people obtain gold by washing in the upper course of the Syr, which takes its rise in the Tian Shan; and lead, mixed with silver, is also procured in the hills to the east of Andijan. The Bolor is particularly rich in minerals. Gold in nuggets forms the staple of trade between Karatagin and Khokand; and slaves, lapis-lazuli, turquoises, and rubies constitute that between Badakhshan and Yarkand. The river Karia, which is worked for gold, rises out of these mountains, and the name of Zar-afshan (auriferous), which some rivers flowing out of it bear, together with the tradition throughout Central Asia to the effect that the ruler of the Gildits keeps concealed in his cavern bars of gold, tends to strengthen the foregoing inferences.—*Russians in Central Asia, Capt. Valikhanof and M. Vemukof*, p. 133.

YASA, ordinances which Chengiz laid down for the guidance of his successors. These are given more or less in Petis de la Croix, D'Ohsson, Deguignes, in Von Hammer's Golden Horde, and in Univers Pittoresque Tartarie, p. 313. The word is said to mean any kind of ordinance or regulation.—*Yule, Cathay*, p. ii. 507.

YASAWUL, a Turkish word, means a guard or armed attendant at a court; an officer of the household, who acts in the capacity of usher in the families of chiefs. It has been adopted into Russia, and is there used to denote a major of Cossacks. In India, a foot soldier; a member of the body guard in China, from Yasamak, to order, to make ready. — *P. Arminius Vambery, Bokhara*, p. 12; *Fraser's Journey into Khorasan*, p. 25.

YASHM. Hind. Jade, also plasma or green silica. The knife handles of Shahpur are made of it. The Messrs. Schlagentweit found quarries of the true jade at Gulbagashen in the valley of Karakash, in their journey from Ladakh to Khotan. Yashmi, a colour like that of jade-stone. To dye this colour, a little turmeric first, then asbarg and alum are used. — *Mag. Survey*, 1857.

YASHTS, according to Martin Haug, were written about B.C. 450–350.

YASIN, a chapter of the Koran, read to a Muhammadan when about to die.

YASODA, wife of Nanda the cowherd, and foster-mother of Krishna.

YASODHARA, cousin and wife of Sakya Buddha. She was the daughter of the Koliyan raja ruling in a tract of country amongst the spurs of the Himalayas, along the banks of the Rohini, the modern Rohana. She bore one son. She and his foster-mother Praja Puti became the first Buddhist nuns.—*Hardy.*

YATAGHAN, Turk., is a long dagger, intended for thrusting rather than cutting, and has a curve, which has been copied in the bayonet of the Chasseurs de Vincennes.—*Burton's Mecca*, ii. p. 264.

YATHRIB, the name of the town of Medina prior to Mahomed's retreat.—*Sale's Koran.*

YATI or Jati. Sansk. An ascetic, the fourth order of the Hindus; also a religious teacher of the Jains.

YATRA or Jatra. Sansk. A pilgrimage, a periodical festival in honour of some idol, to which its worshippers resort; dealers also congregate and make a fair. The Ras-Yatra is a Hindu festival held in many parts of India in the month Kartik (October), and the aboriginal Santal and the Oraon have the circular Rasa dances.

YAU, a tribe who inhabit the skirts of the Arakan mountains westward of Pagan, and who speak a peculiar dialect of Burmese. The Yau country is the tract between the Arakan mountains and the Kyendwen river, at its junction with the Irawadi, between lat. 21° and 22° N., and long. 94° and 95° E.

YAVAN or Javan, the seventh son of Japheth. Colonel Tod says the Hericula also claim from Yavan or Javan, the thirteenth in descent from Yayat, the third son of the primeval patriarch.

YAVANA, a term applied by the Aryan Brahmans to conquering races who approached and invaded India from the north-west. The Bactrian Greeks were certainly so called, and the term seems to have been applied to the Sakæ Scythians, and perhaps to other races. The Yavana invaded Orissa repeatedly between B.C. 538 to A.D. 526 from Persia, Kashmir.

Bunsen supposes the meaning of the word Yavana to be doubtful,—that it may be traceable to times after Alexander, or that it may be an ancient inaccurate name of a people who pushed on towards the Mediterranean. According to Dr. Caldwell, it was a term applied to the Greeks, and subsequently to any race approaching India from the west of Asia. The name was derived from Javan, whose descendants, the Ionians, were the first Greeks with whom the Indians became acquainted, but it came afterwards to signify the Arabs. The Bactrian Greeks are usually termed Yavana in Sanskrit literature; but Colonel Tod warns us not to mistake them for the Yavana descended from Yavana, fifth son of Yayat, third son of the patriarchal Nahus, though the Ionians may be of this race. According to Colonel Tod, the Yavana or Greek princes, who apparently continued to rule within the Indus after the Christian era, were either the remains of the Bactrian dynasty or the independent kingdom of Demetrius or Apollodotus, who ruled in the Panjab, having as their capital Sagala, changed by Demetrius to Euthymedia. The term Yavana is in modern times applied by Hindus of Northern India to Muhammadans of every description; but in works prior to the Muhammadan era, some other people must be intended. The interpretation of the word by Sir W. Jones is Ionians or Asiatic Greeks, and there are some considerations in favour of this, although the chief argument in its behalf is the difficulty of attaching it to any other people. Doubtless, however, Yavana is certainly a term not exclusively applied to the Greeks. According to Professor Lassen, it was used to designate only the Semitic nations. In the Bactrian Pali inscriptions of king Priyadarsi, the word is written Yona, and the term Yona-raja is associated with Antiochus, probably Antiochus the Great, the ally of the Indian prince Sophagasenes, about B.C. 210. The Puranas describe them as wise and eminently brave. Yavana are mentioned as occupying Orissa for 146 years, when they were expelled, A.D. 473, by Yayati Kesari. Dr. Buchanan mentions a dynasty of Yavana (iii. pp. 97, 112) at Anagundi on the Tumbudra river in the 8th and 9th centuries.

The corrupted form of Jonakan is applied on the S.W. coasts of the Peninsula as a title of the Labbai race.—*Bunsen, Egypt*, iii. 555; *Prin. Ind. Ant.; Rajasthan*, i. 233.

YAVANI, a female attendant in the women's apartments. Muhammadan princes had guards of African women in their harems, and female attendants also served in those of the Hindu sovereigns. The term Yavana has been applied by the later Hindus to the Muhammadans, and Yavani seems to have been a term used as distinction of a female servant. It is not likely that either Persian or Arabian women ever found their way into the inner apartments of Hindu princes as personal attendants or guards. Perhaps Tartarian or Bactrian women may have been so designated, as in Madras such women are, in 1872, all styled Mughulani.

YAYATI, fifth king of the Lunar race, was son of Nahusha. His wife Devayani was the mother of Yadu, who founded the Yadava line, and his wife Sarmishtha bore Puru, who founded the Paurava line. His other three sons were Druhyu, Turvasu, and Anu. The Mahabharata, Vishnu Padma, and Harivansa Puranas all tell of his senility, and exchanging it with the youthful vigour of Puru, to whom he again restored it, and made him his successor. Colonel Wilford in his Essays (As. Res. ix. pp. 91, 92) quotes a legend of Yayati dividing his empire among his five sons. To Puru, the youngest, he gave India, the middle part; to Yadu, the ancestor of Krishna, he gave the south or Dekhan; the north to Anu, and the west to Turvasu. The offspring of Turvasu, according to the Harivansa, settled in the south, and the tenth generation from him inclusive, consisting of four brothers—Pandya, Kerala, Chola, and Kola—divided the empire they inherited. Kola lived in the northern part of the Peninsula, and his descendants are called Kol or Koler to this day, and from them India was called Kolaria. —*Dalton, Eth. B.* p. 161.

YEAR.

San, Arab., Hind., Pers.	Annus, ... Lat.
An, Année, ... Fr.	Ano, ... Sp.
Jahr, ... Ger.	Varsha, ... Tam.
Baras, Sal, . . . Hind.	Samutsarum, . . Tel.
Anno, ... It.	

A year, as reckoned by Muhammadans, means the lunar year. Christians reckon the years of the Christian era from the birth of Jesus Christ, and call the Annus Domini, or year of the Lord, the year of Christ. Muhammadans reckon their Hijira year from the date of the hijira or flight of Mahomed from Mecca. The Hindus of India use the lunar year, with an intercalary month. They have various eras. The Hindu sidereal year, according to the Surya Siddhanta, is 365 days 6 hours 12 minutes 36·56 seconds, or 1·000045286 solar years, and is measured by the return of the sun to the same point in the zodiac, the beginning of the sign Mesha. Each month contains as many days as the sun continues in each sign, the civil only differing from the astronomical reckoning in rejecting fractions of a day. The civil year and month begin at sunrise instead of the instant of the sun's entrance into the respective signs. If the fractions exceed half a day, the civil year or month begins with the sunrise following. The months vary in length with the sun's angular motion.

The year of Christ 1867 corresponded to the year
6580 of the Julian period.
2642–43 of the Olympiads, or the 3d year of the 661st commenced July 1867.
2614 from the era of Nabonassar, which dates from Wednesday, 26th February 3967 Julian period, or 747 B.C.
2620 from the foundation of Rome, according to Varro.
From the Creation, 5871 according to the Hebrew text; 6172 according to the Samaritan; 7501 according to the Septuagint.
From the Deluge, 4215 according to the Hebrew text; 4865 according to the Samaritan; 5113 according to the Septuagint.
4968 of the Kaliyug, 1789 of the Saka, and 1274 of the Bengali San; in the sidereal account these three commenced Friday, 12th April.
1042–43 of the cycle of Parasu-Rama, which begins 15th September.
1923–24 of the (luni-solar) era of Vikramaditya, called Samvat, whereof the 1924th Maru year commenced on Friday, 5th April, and the Gujerat, Dekhan, and Konkan 1924th year on 24th August.
1788–89 of the Saka era of Salivahana, of which the 1789th year commenced on the 5th April.
1236–37 of the Parsee era of Yezdejird, of which the 1237th year of the Kadimi commenced 24th August, and of the Rasami on the 23d September.
1283–84 of the Hijira or Muhammadan era, the year 1284 commencing on 6th May.
1276–77 of the Fasli era, beginning 6th June.
1267–68 of the Shahur San, or Sanna Sitain-Miatin-o-alf, commencing on 6th June.
5627–28 of the modern Jewish era, of which the year 5628 commenced on 30th September 1867.

The year 1867 was the 1st year of the 22d cycle of Grahaparivritthi; the 1st of the 84th cycle of Vrihaspati, according to the Tamil account; and 13th of the 85th cycle, according to the Bengal account.

It was the year 2410 of the Buddhist era of India, Ceylon, Siam, etc.; and 1228 of the Burmese Vulgar era; and the 4th year of Chinese 77th cycle of 60 years, which begins about 14th February.

Ramadhan (the month of abstinence observed by the Muhammadans) commenced 8th January 1867; it is a moveable feast.

YEAST, Barm.

Kiau, Tsiu-kiau, . Chin.	Tari, Sendi, Nareli, Hind.
Tsiu-mu, Shin-kiuh, ,,	Spuma di cervogia, . It.
Yest, ... Fr., Sp.	Kallu, . . . Tam., Tel.
Hefen, ... Ger.	

Yeast is a product of the fermentation by which beer is made, upon the surface of which it swims from involving bubbles of carbonic acid gas. It may be obtained in the form of a firm paste. Mixed with moistened flour, it excites the panary fermentation, and is thus used for baking bread. Yeast is a plant belonging to the fungi in the state of sporules or thallus; or the true aerial tufts or heads of sporules, of a multitude of minute oval or circulating bodies or sporules, endowed, under certain favourable circumstances, with extraordinary powers of growth and multiplication. In Britain, three kinds, viz. brewer's, German, and patent yeast, are employed in the manufacture of bread. In the E. Indies, the yeast employed is the fermenting juice of the palms, known as toddy. The vitality of dry yeast is destroyed by falls, blows, bruises, or rough mechanical injuries, as also heat, cold, and chemical reagents. The presence of yeast in a substance containing sugar, or starch convertible into sugar and nitrogenized matter, induces certain chemical

changes comprehended under the term vinous or alcoholic fermentation. These changes in the making of bread consist in the conversion of sugar of flour into alcohol and carbonic acid gas; the latter, in its efforts to escape from the dough with which it is mixed, distends it, forming vesicular spaces in its interior, and so causing it to become porous and light. A genus and species have been constituted for the reception of this organism, under the name of Saccharomyces cerevisæ. This plant has been supposed to be the active cause of fermentation, and the carbonic acid given off during that process has been regarded as the result of the growth of the plant. In China yeast is used medicinally.—*Schleiden, Principles of Scientific Botany; Micrographic Dictionary; Smith; Poole, St. of Commerce.*

YEDDATURA, a town in Mysore, 18 miles N. of Yelwal. It has a pagoda on the banks of the Cauvery river, with a tank stocked with a species of carp so tame that they can be fed from the hand, and swim about among the natives when bathing.

YE DHARMA HETUH PRABHABAH, etc., a Buddhist formula, meaning whatever moral actions arise from cause, the cause of them has been explained by Tathagata. Thus what is the check to these actions is set forth by the great Sramana.

YELLAMALA or Yerramala, a range of mountains in the Kurnool and Cuddapah districts, Madras, lying between lat. 14° 31′ and 14° 57′ 40″ N., and between long. 78° 10′ and 78° 32′ 30″ E. The range runs north-west across the Jammalamadugu taluk in Cuddapah, and thence north through Kurnool, nearly to the Domal valley; in some parts covered with thick forest. They are inhabited by the Chenchwar and Koracha races. —*Imp. Gaz.*

YELLAVADU. TEL. A village servant who looks after the village boundaries.

YELLOW.

Asfar,	ARAB.	Zard,	PERS.
Jaune,	FR.	Amarillo,	SP.
Gelb,	GER.	Manja,	TAM.
Pila,	HIND.	Passapu-warnam,	TEL.
Giallo,	LAT., IT.	Sari,	TURK.

A colour largely obtained by Indian dyers for dyeing cloth, chiefly from the safflower plant.

YELLOW GUM TREE, a term applied in Australia to several species of Eucalyptus. They are called black boys, and their resin black boy gum, of which an average tree will yield 55 lbs.

YELLOW SEA, a gulf of the North Pacific Ocean, which extends north between the provinces of Chang-tong and Peh-chi-li, in China, on the west, and the peninsula of Corea on the east. The coasts in general are low, and the water of a dirty yellow or green colour. In the south-east part are an immense number of small islands, called the Corean Archipelago.

YELLOW WOOD TREE of Moreton Bay is the Oxleya xanthoxylon. It grows to a height of 60 to 70 feet.—*G. Bennett.*

YEMEN, a province in the southern part of Arabia, washed on the west by the Red Sea, and on the south by the Indian Ocean. It comprises nearly 70,000 square miles, and consists of two natural divisions, the upper or mountain district, and the lower country called Tehama. The lower country has many desert and sandy tracts, but there are several towns and hamlets on its coast, and along the shore are numerous small islands, interspersed with coral reefs; that of Tarsen is celebrated for its grotto of pearls. In this district the Beni-Halal Bedouins are the principal tribe. They are very poor, and are predatory. In the north of Tehama is Lohaya, an Arab settlement. The harbour is good, and the trade in coffee considerable. The island of Kamran, lying about 18 miles south of Lohaya, has a better harbour than the latter place. Farther south is the town of Hodaida, with an excellent port, fortified by a small citadel. The principal coffee mart in Arabia is Bait-el-Fakih, situated at a moderate distance from Mocha, and near the mountain regions where the berry grows. The capital of Tehama, Zebid, near one of the most beautiful and well-irrigated valleys in the country, possesses many mosques and other public buildings, with a handsome aqueduct, and an academy where the youth of Yemen and Tehama receive a liberal education, and is besides one of the chief meeting-places where the merchants of Egypt, Arabia, and Persia assemble. Farther south is the town of Mocha, second in importance only to Zebid. Azia is celebrated for the bravery of its people, and the valley of Nejran renowned for the beauty of its site. A principal town is Hamdan, about 30 days' journey from Mecca. Of these subdivisions of Yemen, that of Sana is the most southerly, stretching even to the Arabian Sea, where it touches Aden.

The level tract of country called Balad Aden commences at Bab-ul-Mandab, and runs easterly along the coast a distance of 132 miles. At about 90 miles from the western extremity is the town of Aden, in ancient times a city, the depot of the trade carried on between India and Egypt. This city was destroyed by the Romans in the first century of the Christian era, prompted by the desire of keeping the Indian trade exclusively in Roman hands. In the 11th century we find it again enjoying all the advantages which its position affords; but on the discovery of the Cape of Good Hope route, all traces of commercial prosperity departed, and the Turks became masters of Aden. In 1839 Aden became a British possession; and the population, which in 1839 amounted only to 1000, had in 1842 risen to nearly 20,000, indicative of the readiness with which many of the oriental races can settle down to peaceful avocations so soon as they can find for their protection a stable government. The little island of Sira, lying on the east side of the town, forms a bay opposite Aden, and from this point the peninsula extends three miles westward, forming a commodious and safe harbour. The great monarch, Suliman the Magnificent, constructed an aqueduct at Aden, which commenced at a distance of eight miles from the town. Two caravan routes lead from Aden into the interior, but diverge considerably to arrive at Lahej, the capital of the Abdali Arabs. In the S.W. the straits of Bab-ul-Mandab separate Arabia from Africa. These straits are between 20 and 30 miles in breadth, and are celebrated amongst ancient writers for the dangers encountered by navigators who ventured within these gates of tears.

Perim Island lies about three miles distant from the Asiatic coast, thus dividing the waters of the strait into two channels, that on the Asiatic side

being narrower but deeper, and also free from the impediments offered by small islands, which are rather numerous on the African side.

Yemen means safety, felicity; the term Al-Yemen, the district of safety, is therefore correctly translated in the words Arabia Felix.—*Wellsted's Travels; Playfair's Aden; Niebuhr's Travels*, ii. p. 105.

YEMMI GUDA, the hill of buffaloes, and Vennai Guda, the hill of butter, indicate pastoral stations of the Peninsula.

YEN-YANG, a Chinese emperor who began to reign B.C. 781. Confucius lived under successors of his dynasty, and recorded the observations of the solar eclipses from B.C. 720 to 481.

YERAVER, predial slaves of the Kodaga proprietors of Coorg; tempted by the wages offered by the coffee-planters, they have refused to work for their masters. The peasant masters on one occasion came down in force upon one of the coffee estates where a party of Yeraver were working, and carried them off. The same state of things existed in Santalistan, where the bondsmen—the nexi or addicti of the Romans—were called Kumea. The railroad offered them work and wages, and Mr. Yule, the commissioner, at once refused to give decrees on the debt-bonds which their masters filed in court. He went further, and abolished all imprisonment for debt. The origin of this predial slavery is probably the same. If the Yeraver are bond-debtors, the Coorg will produce the bonds, and the judge may decide as to their legality. Otherwise they are free men. Prior to the British occupation of Coorg (1833), the Yeraver were sold for less than cattle. The British discontinued this state of things, but up to the latter part of the 19th century, in those Coorg families amongst whom they are well treated, they remain much as usual, though able to leave when they like. They are fed, clothed, their marriage expenses paid, and they get small patches of land on the farms, and they are reconciled to their position. They often desert, however, and go to the plantations. When the Contract Act came into force, a few made an attempt to make legal bond slaves of them, but the courts protect them, and do not allow long contracts. Some Yeraver are a migratory race in Coorg, of middle size, with coarse features, black and straight hair. They are labourers, and are believed to have come from Malabar. Their language is said to resemble Malealam. They worship demons, and have no priests.—*Friend of India*, December 9.

YERCAUD, a settlement on the southern part of the Shevaroy Hills, in Mutunaad, in Salem district, Madras, lat. 11° 51′ 38″ N., long. 78° 13′ 5″ E. It is the principal and oldest station in the Shevaroy Hills, 4828 feet above the sea-level. The distance from Salem is 14 miles, and from Shevaroy Hills railway station 12 miles. This railway station is 3 miles from the foot of the hills. The climate is mild and pleasant, the temperature averaging about 14° F. less than on the plains.—*Imp. Gaz.*

YERKAL VADU or Yera-kedi.

Yerkullo var, . .	TEL.	Yerakedi, Yerukellu,	TEL.
Eri-kuvadu, . .	,,	Kurshi-wanlu, . .	,,

A homeless race. In communities they style themselves Yerkal, and they give the same appellation to the language in which they hold communication with each other. Some of them seem to have been converted to the Brahmanical faith, and are now of the Vaishnava sect. With the exception of the cow, almost all animals are used by them as food. Their dead are burned. The Eruku, also called Yerkal, Yerkalvadu, Kurshi-wanlu, Yera-kedi, Yera-kellu, and Eri-kuluvadu, in the Canarese part of the Peninsula of India, occupy themselves ostensibly as basket-makers, and in fortune-telling. But they are notoriously predatory, and steal girls, whom they devote to prostitution. They are to be found in mat huts on the outskirts of most towns. The Yerkala of the Nellore district are migratory mat and basket makers, using the midrib and leaflets of the date palm. They also make wooden combs, work as labourers, and a few have settled and engaged in cultivation. They rear pigs, poultry, donkeys, and dogs, and eat the flesh of most animals. They are usually of a dark-brown colour, the men are of spare and light make, but hardy, with low foreheads and eyes, short nose. They wear only a strip of cloth, and they tie their hair in a knot above their brow.

The Yerukala of Nellore are divided into many subdivisions, and the more wealthy of their number engage in agricultural pursuits, and hold lands from the Government. Some tell fortunes, others make baskets, collect herbs and jungle roots, eat game, and work as coolies to the better classes of ryots. They wear little or no clothing. When they can they commit dacoities, highway robberies, and such offences. The god they worship is sacred to the Triputti Hills. Marriage ceremonies are performed, polygamy is rife, but widow marriages are permitted. All wives are bought from the parents, and a wife is usually valued at twenty pagodas. Among the Yerukalas in Venkatagherry only, the first wife costs the above sum, but in other places less than two pagodas. The language of the people is a Telugu idiom, considerably mixed up with Tamil and Canarese.

Amongst the Yerkala of Southern India, a custom prevails by which the first two daughters of a family may be claimed by the maternal uncle as wives for his sons. The value of a wife is fixed at twenty pagodas. The maternal uncle's right to the first two daughters is valued at eight out of twenty pagodas, and is carried out thus,—if he urge his preferential claim, and marry his own sons to his nieces, he pays for each only twelve pagodas; and similarly, if he from not having sons, or any other cause, forego his claim, he receives eight pagodas of the twenty paid to the girl's parents by anybody else who may marry them.—*Shortt, Trans. Ethn. Soc. MS.* vii. p. 187; *Balfour in Madras Jour. Lit. and Science*, xviii. p. 4; *Lubbock, Orig. of Civil.* p. 103.

YERLA. MAHR. A pent-house worn by ploughmen in the field. It is made of the leaves of the palmyra.

YESKAR. KARN. A village servant, the porter or gate-keeper, usually a Mahratta.

YEVARU, in Coorg, a tribe of predial slaves.

YEVU and Baikuri, CAN., are fish traps adapted to falls. The yevu is a platform made of bamboo, somewhat bellied, so as to lead ladderwise from the top to the bottom of a waterfall at an angle of 45°. The kunjal, another trap, is a rude sort of kuri,

YEW TREE, Taxus baccata, *Linn.*, grows in the Mehra forest near Abbottabad, Hazara. At Choongtam, in Sikkim, the yew appears at 7000 feet, whilst on the outer ranges, as on Tonglo, it is only found at 9500 to 10,000 feet; and whereas on Tonglo it forms an immense tall tree with long sparse branches and slender drooping twigs, growing amongst gigantic magnolias and oaks, at Choongtam it is small and rigid, and much resembling in appearance the English churchyard yew. At 8000 feet, the Abies Brunoniana is found, a tree quite unknown farther south. But neither the larch nor the Abies Smithiana (Khutrow) accompanied it. The yew, it is said, spreads east from Kashmir to the Assam Himalaya and the Khassya mountains; and the Japan, Philippine Islands, Mexican, and other N. and S. American yews belong to the same widely-diffused genus. In the Khassya (its most southern district) it is found as low as 5000 feet above the sea-level.

YEZD town has 30,000 souls, of whom 4000 are fire-worshippers, and 1000 Jews. They are engaged in the manufacture of silk, and their merchants visit Bombay, China, Java, and the Mauritius. Yezd is mentioned by Barbaro as a most industrious place, flourishing by its silk and cotton manufactures, and supplying with these a large part of Asia. These manufactures still continue. Many important caravan routes converge at Yezd, whilst the desert has given it security, and thus it has become a considerable mart. Yezd is regarded as holy by the Muhammadans, a sanctity perhaps borrowed from the fire-worshippers, who still linger here in degradation. The district of Yezd, if included within the limits of Khorasan, occupies the south-west corner of that province, being encompassed on all sides by salt desert, which separates it from Kerman and Fars upon the south, and from Isfahan of Irak upon the west. The town of Yezd, an oasis in the great Persian desert, is built on a large sandy plain, encompassed on most sides by hills. It is situated on the edge of a sandy desert, produces little of itself, but with infinite labour a tract of gardens and orchards has been cultivated near the base of the hills, where very fine apricots and melons are grown.—*Fraser's Khorasan; Pottinger's Tr.* p. 421; *Ramusio*, ii. p. 106; *J. R. A. S.* viii. p. 349, *in Yule, Cathay*, i. p. 52; *MacGregor*, iv. p. 604.

YEZDEJIRD III., the last of the Persian kings, who was defeated by Abdullah, son of the khalif Omar. His lieutenant Rustam opposed the Arabs in an obstinate battle, A.D. 636, at Kadesiah on the Tigris. Rustam was slain, and the leathern apron of the mythical blacksmith Caveh, the ancient standard of the Sassanians, was captured by the Arabs. This victory gave the conquerors the province of Assyria, since called Irak-i-Arabi, and was followed by the sack of Ctesiphon. A second battle at Yalula drove Yezdejird as a fugitive into the hills of Fars; but 150,000 Persians made a final stand at Nehavend, among the hills south of Hamadan, the site of the old Medean capital Ecbatana, and their defeat (A.D. 641) was the final overthrow of the native Persian power, and of the religion of Zoroaster. The standard of the Muhammadans was rapidly carried over the tableland of Iran, and beyond the Oxus.

Isfandiar, brother of Rustam, joined the Arabs, but Yezdejird fled south to Isfahan, then on to Kerman and Balkh, finally taking refuge at Merv. Here he sought the aid of the Khakan of the Turks, and of the emperor of China. The Khakan espoused his cause, and for several years a desultory war was waged in the neighbourhood of Merv, but in the end Yezdejird and the Turks retired across the Oxus, about A.H. 31, A.D. 651. Yezdejird perished miserably, A.D. 652, in the hut of a miller, whither he had fled for refuge (Sir W. Muir's Caliphate, pp. 259-297). His death occurred in the eighth year of the khalifat of Usman.

The era of Yezdejird III., or the Persian era, began on the 16th June A.D. 632. The year consisted of 365 days only, and therefore its commencement, like that of the old Egyptian and Armenian year, anticipated the Julian year by one day in every four years. This difference amounted to nearly 112 days in the year 1075, when it was reformed by Jalal-ud-Din, who ordered that in future the Persian year should receive an additional day whenever it should appear necessary to postpone the commencement of the following year, that it might occur on the day of the sun's passing the same degree of the ecliptic.—*Gibbon*, i. 299; *Prinsep's Antiquities by Thomas; Yule, Cathay*, i. 85; *Muir's Caliphate.*

YEZIDI have a tradition that they originally came from Basrah, and from the country watered by the lower part of the Euphrates; and that, after their migration, they first settled in Syria, and subsequently took possession of the Sinjar Hill and the districts they now inhabit in Kurdistan. Their principal strongholds were visited by Mr. Layard, at the Jabal Sinjar, a solitary mountain rising in the centre of the Mesopotamian desert to the north of Mosul. Below the cluster of buildings assigned to the people of Semil is a small white spire, springing from a low edifice, neatly constructed, and, like all the sacred edifices of the Yezidi, kept as pure as repeated coats of whitewash can make it. It is called the sanctuary of Shaikh Shams, or the Sun, and is so built that the first rays of that luminary should as frequently as possible fall upon it. Near the door is carved on a slab an invocation to Shaikh Shams; and one or two votive tablets, raised by the father of Husain Bey, and other chiefs of the Yezidi, are built in the walls. The interior, which is a very holy place, is lighted up by a few small lamps. At sunset, as Mr. Layard sat in the alcove in front of the entrance, a herdsman led into a pen attached to the building, a drove of white oxen. He asked a Cawal, who was near, to whom the beasts belonged. 'They are dedicated,' he said, 'to Shaikh Shams, and are never slain except on great festivals, when their flesh is distributed amongst the poor.' The dedication of the bull to the sun, so generally recognised in the religious systems of the ancients, probably originated in Assyria, and the Yezidi may have unconsciously preserved a myth of their ancestors. So far from Shaikh Adi being the scene of the orgies attributed to the Yezidi, the whole valley is held sacred, and no acts, such as the Jewish law has declared to be impure, are permitted within the sacred precincts. No other than the high priest and the chiefs of the sect are buried near the tomb. Many pilgrims take off their shoes on approaching it, and go barefooted as long as they remain in its vicinity. The Yezidi

recognise one Supreme Being, but, so far as Layard could learn, they do not offer up any direct prayer or sacrifice to him. When they speak of the devil, they do so with reverence, as Malik Taos, King Peacock, or Malik-ul-Kuwat, the mighty angel. Shaikh Nasr distinctly admitted that they possess a bronze or copper figure of a bird, which, however, he was careful in explaining was only looked upon as a symbol, and not as an idol. They believe Satan to be the chief of the angelic host, now suffering punishment for his rebellion against the divine will, but still all-powerful. They frequently pass their hands through the flame, kiss them, and rub them over their right eyebrow, or sometimes over the whole face.

They dwell in black tents of cloth made of goat's hair, which they surround with hurdles of reeds and thorns closely twisted together. The tents are square, or of the form of a parallelogram, the Turkoman tent being round and turret-shaped at top. Like the Arabs, the Yezidi move about in tribes for greater safety, and pitch their tents in a circle when they encamp, leaving its interior open for their cattle and flocks. Part of them dwell on the banks of the Tigris, in the pashaliks of Mojul and Baghdad. One large tribe occupies the valleys in the Sinjar mountain, which rises directly S. of Mardin, in the middle of an immense plain, and stretching towards the S.E., nearly parallel with the river Khabour, the ancient Chaboras, terminates a little to the east of Sakkat-ul-Abbas. They are cruel and inhospitable. — *D'Anville, Geographie du Tigre et de l'Euphrate; Layard, Nineveh; Burton's Scinde; Macdonald Kinneir's Memoir; Latham, Nationalities of Europe.*

YEZO. The Aino are the aboriginal races of Yezo, but their severe treatment by the Japanese has led them to other countries. They occupy the southern part of the island of Saghalien, which is in possession of the Japanese. The Aino are of short stature, with broad faces of the Mongol type. They are a timid race; their limbs are hairy; they have bushy beards and long tangled hair, large heads, and clumsy figures; the expression of their face is that of good nature combined with stupidity. According to M. Rosney, their language is dissimilar to Japanese, and that spoken in the Kuriles and in the island of Yesso, is also different from Japanese.—*Adams*, p. 240.

YGDRASIL, in Norse mythology, the tree of knowledge. See Odin; Tree.

YIH-KING, an ancient Chinese book. The annotation of Confucius to the ancient work Yih-King, states that Fu-he got the idea of his diagrams from a figure on the back of a 'dragon horse' which issued from a river. The same annotation states that, before Fu-he invented the Eight Diagrams, he observed the configurations and appearances in the heavens and the earth, and the marks on birds and beasts; also that he derived information from his own person and from things around him. These terse passages of an ancient author are, when taken literally, apt to give a ridiculous air to the Eight Diagrams. But a little examination shows the meaning to be that Fuh-he constructed the Eight Diagrams only after a careful and extensive survey of nature and its varied phenomena, as exhibited in the departments which we call astronomy, meteorology, physical geography, and natural history, and after reflection on his own nature, physical and mental, and on the nature of men generally as manifested in the events of the social life around him. The Eight Diagrams formed, in fact, an illustrative figure intended to elucidate Fuh-he's theory of the universe, a theory adopted after careful reflection on all animate and inanimate nature without his ken. They are in so far undoubtedly the foundation of Chinese philosophy, but it must not be assumed that learned Chinese conceive any occult power to lie in them. Much in the same way we might say that the Literary Prince, having been imprisoned (while he was still a vassal of the dynasty he overthrew) by his jealous suzerain, during the years B.C. 1144, 1143, 1142, made in the seclusion a different arrangement of the Eight Diagrams; and he, with one of his sons, Chow-kung, who laboured after the establishment of the family in the sovereignty, gave permanency to their joint development of the national philosophy, by attaching a few words of explication to each of the sixty-four doubled diagrams. Fuh-he's diagrams, as re-arranged, together with the short explications of the first monarch of the Chow dynasty and his son, form the basis or text of the first of the Chinese Sacred Books, the Yih-king. After an interval of six centuries, Confucius seems to have used the Yih-king in framing his own philosophical views.

YIN and Yang, with the Chinese, the male and the female principle. These are represented above the entrance doors of dwelling-houses, as charms to ward off calamities. They are also represented on the flag flying at the mainmast of the imperial war junks.—*Gray*, ii. pp. 44, 247.

YING-BAU, a tribe supposed to belong to the Red Karen, whose dress and language they use. They dwell about 100 miles north of Tounghoo, north of the Karen-ne or Red Karen.

YOGA, a school of philosophy.

YOGA, in Hindu astronomy, the leading or principal star of a lunar mansion, the position of which is given in the Hindu astronomical tables. There are 28 yoga stars (including Abhijit) in the lunar zodiac; but, with the exception of 16 or 17 of these (on the identity of which there can be little doubt), it is very uncertain to which of the stars in the European catalogues the remainder correspond. Harshana (which no doubt is the same as Spica Virginis) seems to be the yoga which drew most the attention of the ancient Hindu astronomers, probably on account of its convenient magnitude and declination, which at the beginning of the 9th century was 9° 38' 13" S. To this star they referred the beginning of the 7th month of their solar sidereal year, from which they concluded its beginning; and there is every reason to suppose that it was on the result of observations of Harshana that they established their Cranti-Pata-Gati or precessional variation; a surmise which, if correct, offers a singular concurrence of circumstances, for it was by observations of the same star that Hipparchus first discovered (in the 2d century before Christ) the motion of the fixed stars from west to east.

Yogu, a term so pronounced by the Telugu astronomers, but yoga as spelt by the Carnatic Sastri, is an astrological element, containing the same number of accidents as there are yoga in

the 27 regular mansions of the lunar zodiac, bearing the same names, and arranged in the same order, but having no sort of astronomical reference to them. A yoga is the time during which the sum of the motions of the sun and moon amounts to one nacshatra, or 13° 20′. Its mean duration is 59g. 29v. 21p. 75 Indian time (23h. 47m. 44·24s. European time), 17 of which are nearly equal to 16 days; which occasions an equation somewhat similar to that of the Cshaya tithi.—*Captain Warren, Kala Sankalita.*

YOGA, in Sanskrit, means union, junction, but in Hindu philosophy, re-union with spirit, union of separated with universal soul. The yoga is one of the schools of Hindu philosophy teaching the eternity of matter and spirit as well as of God, and the obtaining of final liberation from life by ascetic practices. The Yoga is the third degree in the Saiva systems, and is the practice of abstraction of mind. As commonly understood, the term means abstract devotion, by observing which superhuman faculties are supposed to be acquired admitting the practice of magical rites.—*Bunsen*, iii. p. 562; *Hind. Th.* ii. p. 13; *Warren, Kala Sankalita.*

YOGHOURT. Kurd. A preparation of sour clotted cream or milk.—*Rich's Kurd.* i. pp. 117, 235. See Youart.

YOGI, a follower of the Yoga philosophy, a practiser of ascetic devotions; one who, by the practice of the Yoga, has acquired supernatural powers. A devotee seeking the attainment of Yoga has to learn the rules of Yoga, to acquire perfect knowledge; to employ this knowledge practically, and overcome the material influence of the primary elements, and finally destroy all consciousness of personality and individuality (ahankara), and the soul thus becomes free from matter. In ordinary acceptation, a Yogi is a Hindu religious mendicant, of whom there are various orders.—*Wilson, Hind. Theat.* ii. p. 107.

YOGINI, a female devotee; also, in Hinduism, a female fiend, or a divinity of an inferior order, often associating with human beings, and usually working mischief. Eight of these demons, attendants on Durga, are named Bherunda, Marjani, Matali Nayaki, and Jaya or Subhachara, Malaya-gandheni, Kaumudika, Nayaki, Su-lakshana, and Su-Nanda.

YOGINI TANTRA, one of the books of the Hindu Tantra.

YOIDYU, the professed, though not the exclusive, medical men amongst the Bengali people. They study the Nidana, Rakshita, Drivya-goona, and other medical Shastra. Commonly known as the Bed or Ved.—*Ward on the Hindoos*, iii. 95.

YOJANA or Ved. Sansk. An astronomical and geographical measure, deduced from the ratio of the diameter of the earth to the circumference of its equatorial circle. The dimensions of the yojana, like those of any other measure, originate in an arbitrary division of extent, for which the Hindus have chosen a finger or angula as a standard to be found in nature. By that common measure they estimate not only distances and the dimensions of the earth, but even the distance of the planets, their parallaxes, and (when referred to particular points on the surface of the earth) the effects of their longitude and latitude as to time. The Hindu mathematicians divide the diameter of the earth into 1600 parts, whence they have this expression $\sqrt{10}\times1600 = 50596$ yojana for the value of the equatorial circle. An angle of one minute of a degree is supposed to be subtended by 15 yojana, at the mean distance of the moon; so that, dividing the earth's semi-diameter (800 yojana) by 15, we have 53′ 20″ for the moon's mean horizontal parallax. It follows from this result that 53′ 20″ of the moon's orbit will measure 15 yojana, and that her whole orbit (360°) will measure 324000 yojana. Hence 5059 (the circumference of a great circle of the terrestrial globe in yojana) is to 800 yojana (its semi-diameter) as 324000 (the circumference of the moon's orbit in yojana) is to 51235 yojana, her mean distance from the earth, from which it follows that this distance (according to the estimate of Hindu astronomers) is about 64 semi-diameters of the earth. As the moon is supposed to complete 57753336000 sidereal revolutions in a calpa, this number drawn into 324000, gives 18712080864000000 yojana for her absolute motion during that time. It is a principle in Hindu astronomy that the absolute motion of each planet in a day, or any other time given, is equal to the absolute motion of the moon in the same time. Hence, if the absolute motion of the moon during a calpa be divided by the number of mean revolutions completed by any planet, during that period it will give the cacsha or circumference of the planet's orbit in yojana. To convert degrees of latitude and longitude into yojana, they use the following proportion: As 360 °to the proposed number of degrees, so 5059 yojana (the circumference of the equatorial circle) to the number of yojana sought. The Hindus subdivide the yojana into a great number of parts, in the following manner:—The yojana ÷ 4 crosa ÷ 1000 dhanush or danda ÷ 4 resta or cubits ÷ 2 vitisti or spans ÷ 2 pada or foot-breadths ÷ 6 angula or finger-breadths ÷ 4 yara. Some make the crosa = 2000, danda or half a yojana, which agrees better with that in which the distances are usually computed. The yojana is regarded in Ceylon as being equal to 16 English miles.—*Hardy's Eastern Monachism*, p. 443; *Warren, Kala Sankalita.*

YOJNA-GANDA, the mother of Vyasa. She was a fisherman's daughter, and king Santanu was the father of Vyasa. The name means a sweet fragrance (ganda) whose odour extends a yojna (4 miles). The names given by Muhammadans to the women of the harem are of a similar character,—Yasmin, Sosun, Jasmine, Lily.

YOMA, in Burmese, a peak, a great ridge, a backbone, and is applied to two mountain ranges. The mountain chain of the Arakan Yoma runs from the eastern end of Cachar, parallel with the coast, at an average distance of 40 or 50 miles, down to Cape Negrais, lat. 16°, and is of an average height of 4000 or 5000 feet. Starting from the Blue Mountain, in lat. 22° 37′ N., and long. 93° 11′ E., this range runs southwards for a distance of over 700 miles, dividing Arakan from Independent Burma in the north, and from the British province of Pegu in the south. The Blue Mountain rises to 7100 feet. The last bluff at Cape Negrais is crowned by the Hmawdan pagoda. Pyramid Hill is 3000 feet. The crest of Aeng pass is 4517 feet. The pass from Podangmew to Ramree is 4000 feet. Cape Negrais is about 300 feet high.—*Dr. M'Clelland, Govt. Selections*, ix. 6.

YONI. SANSK. The place or elements of birth, from Sanskrit root Yu, to mix. In the physiological religion or philosophy of the Hindus, the lingam and the yoni represent organs of the human body, and the symbols are to be seen in almost every street of every town of British India. The yoni is the symbol of the bhaga, and the lingam, priapus, or phallus, is that of the bija. It is a cosmic philosophy based on the union of the sexes, and Hindu writers represent Narayana moving (as his name implies) on the waters, in the character of the first male, and the principle of all nature, which was wholly surrounded in the beginning by tamas, or darkness, the chaos, or primordial night of the Greek mythologists. The chaos is called prakriti, or crude nature; and the male deity has the name of Purusha, from whom proceeded sakti or power; that power, in its first state, was an aptitude, and lay dormant or inert until it was excited by the bija or vivifying principle. This power or aptitute of nature is represented under the symbol of the yoni or bhaga, while the bija or animating principle is expressed by the linga. The symbols of the lingam and yoni are constructed of stone or metal of some kind, the lingam surrounded by the yoni. At the very extremity of Malabar Point, on the island of Bombay, is a cleft rock, to which pilgrims resort for the purpose of regeneration by the efficacy of a passage through this sacred type. This aperture is of considerable elevation, situated among rocks of no easy access, and, in the stormy season, incessantly buffeted by the surf of the ocean. The devotee, leaving his clothes and his sins at one side, passes through cleansed and regenerated.—*Moor; Coleman; Colebrooke; Wilford; As. Res.* ii. p. 471, iii. p. 365, iv. p. 366, vii. p. 256, viii. p. 274.

YORA-BANGALA, from Yora or Jora, a pair, and Bangala, a one-storeyed house; an idol-temple, made like two thatched houses or bangala placed side by side, and has a double-pitched roof, generally covered with tiles or bricks. The front is open without doors. These temples are dedicated to different gods, but now are not frequently built in Bengal.

YOUART. PERS. Curds and whey, the principal delicacy to be found amongst the wandering tribes near Syria.—*Eothen's Travels*, p. 50. See Yoghourt; Kurut.

YOUNG, CAPTAIN JAMES, I.N., author of Memoir of the Maldive Islands, Bom. Geo. Trans., 1836-1838, Bombay reprint, i. p. 54; Account of Famine in the Laccadives in 1841, in Bombay Times, August 13, 1851, October 1, 1847.

YOUNG, CAPTAIN JOHN, younger brother of Captain James Young, author of Currents in the Arabian Sea. See Orlebar's Account of, in Athenæum, 1847; Rep. Brit. Ass., 1848. His ship, the *Cleopatra*, was lost in a cyclone.

YU the Great is the first Chinese monarch of whose reality there is no doubt, and his accession occurred about 2000 years before the Christian era. Systematic Chinese history hardly goes back so far as B.C. 2000, *i.e.* to the reign of Yu. Yu was the founder of the dominion of the kings or princes of Shen-si in S. China, as far as the great river. He diverted the course of the Yellow River to fertilize the lands between the two rivers.

YUAN CH'AO PI SHI, or Secret History of the Mongol Dynasty, a history of Chengiz Khan and his ancestors, written in the Mongol language about A.D. 1240.

YUCCA, a genus of plants belonging to the section Aloe, of the natural order Liliaceæ, and called Adam's needles; natives of the southern provinces of the United States. They are conspicuous for their lily-like white flowers, as well as for their long sword-shaped leaves terminated by a thorny point. All abound in fibre of a fine quality, and strong in Y. aloifolia, Y. angustifolia, and Y. filamentosa. The Yucca fibres are amongst those which have received the name of silk grass. Y. gloriosa, *L.*, common Adam's needle, is a native of Peru and North America, blossoms in July and August, its panicle of elegant flowers attaining a height of 10 or 12 feet. Y. aloifolia, *L.*, aloe-leaved Adam's needles, has leaves with the edges bordered by fine callous notches. It is a native of N. and S. America, but it is grown in all parts of India; it produces a white, pliant, and strong fibre, resembling that of the agave in all respects, but is apt to be discoloured by steeping, which the agave is not.

Yucca gloriosa, Adam's needle, is sometimes called an aloe; has a strong, fine, but rather stiff fibre, suited for the manufacture of cordage; it very soon becomes discoloured by steeping, but is not so liable to rot as some of the other fibres of this kind. The plant is not abundant in Southern India, but grows easily and might be propagated to a great extent.—*Royle; Riddell; Roxburgh; Voigt: Mad. Exhib. Jur. Rep.*

YUCHI or Yuti appear to be the tribe whom the Greeks called Tochari. They formed part of the Barbaric kings of Bactria.

B.C. 126 Hermæus—rules over Parop., Nyssa, Gand., Peuk. (The Su-saka race obtain Arya, Drangia, and Arach. from the Parthians.)
Mauas—has Taxila, Por., Reg., Cath., Pattalene, Syrastrene, Larice.
,, 105 Kadphises—(Yuchi) takes possession of Hermæus' kingdom, and Taxila from Mauas (Kozola Kadaphes).
Vonones. Spalygis. Spalirises. } Paropamisidæ.
,, 110 Aras—succeeds Mauas, obtaining also in B.C. 90 Nyssa, Gand., and Peuk.
,, 80 Azilas—succeeds Azas in the three latter, adding Taxila and the Paropamisidæ.
,, 80 The Soter Megas—obtains the dominions of Azas, and subsequently those of Azilas.
,, 60 The Yuchi again possess Parop., Nyssa, and Taxila, etc.
,, 26 Gondophares—reigns in Ariana. Abdagasses (and Sinnakes or Addinigaus), ditto in ditto, less the Parop.
A.D. 44 Arsaces (Ornospades or Orthomasdes)—ditto, ditto.
,, 107 Pakores Monnesses—ditto, ditto (Hiatholch), in Bactriana.
,, 207 Artemon—in Arya, Drangia, Arachosia.

The Yuchi are believed to have been of a northern race, who became known in the west as Indo-Scythians, and at a later date as White Hun. They were driven from their seats somewhere between China and Khotan, by the great Turkish race of Hiong-nu. After some intermediate halts, they arrived first in Tawan or Farghana, and afterwards in Tahia or Bactriana, where they destroyed the Greek dynasty, and settled themselves. The Chinese emperor was desirous of opening communication with them in order to excite a diversion against the Hiong-nu, the constant disturbers of the Chinese frontier, and

about B.C. 135 he sent for this purpose a party under an officer called Chang-kian. On their way they were caught by the Hiong-nu, and kept prisoners for ten years. Chang-kian then escaped with some of his comrades, but, adhering to his mission, succeeded in reaching Tawan, where he was well received by the people, who were acquainted by fame with the power and riches of China, though they had never had any direct communication with that country. Finding that the Yuchi had gone south to Bactriana, he followed them thither, but failed to induce them to quit their new seats upon the Oxus to return to their eastern deserts and battle with the Hiong-nu.

During the first century, the power of China had decayed, and the Hiong-nu recovered their ascendency. In A.D. 83, however, Panchao, one of the most illustrious commanders in the Chinese annals, appeared in the field, and in a few years recovered the Uigur country and all Western Tartary to the empire.

The Yuchi and other kindred tribes invaded Sogdiana about B.C. 127-126, and finally, about B.C. 120, conquered the whole of Bactria. They subsequently conquered Kābul, and occupied the country between that city and the Indus. Before the Christian era, they were firmly seated on that river, and, under the great king Kanishka, had become an Indian power of very considerable importance. Kanishka is variously supposed to have reigned from about A.D. 20 to 40, while another account makes him the founder of the Saka era A.D. 79. The power of these Turushka kings spread over all the Panjab, southwards as far as Muttra on the Jumna, in the first century of the Christian era. At the same time, another body, the Sah, who also used the Saka era, crossed the Indus lower down, and occupied the province of Gujerat. From the time of Kanishka, a continuous succession of tribes of Scythian origin poured across the Upper Indus into India, each more Turanian than the one preceding it, till the Moghul conquest of India in the 15th century. The western races distinguished as Yavana, who may have been the Bactrians driven by the Yuchi from their homes B.C. 150 or 130, and who appeared in Orissa before and about the Christian era; the Camboja, who joined in the advancing races, seem to have come from a country between Kandahar and Kābul; and the Saka, the classic Sacæ or Scythians, pressed on with the rest, and were formidable during the first four centuries of the Christian era, till defeated by king Vikramaditya.

According to Chinese authorities, the Yuchi retained their hold in India certainly till A.D. 222 (J. A. S. B. vi. p. 63), and probably for some time longer, but their power seems to have been then on the wane.—*Fergusson*, pp. 27, 28; *Walter Elliot; M. L. S. J.*, 1858, p. 77; *Yule, Cathay*, i. pp. 54, 55; *Cunningham, Ancient Geography of India.*

YUDISHTHRA, a prince of great celebrity, who, according to Indian authors, reigned about the beginning of the Kaliyug; some, however, fix the epoch of his reign 653 years later, or in the year 2448 before Christ. He is also said to have been contemporary with the astronomers Parasara and Garga. As the commencement of the Kaliyug was B.C. 3101, the true date seems to have been about B.C. 1400. Yudishthra was the eldest of the five Pandu princes. He was educated by Drona, at the court of his uncle Dhrita Rashtra, and his uncle declared him Yuvaraja or heir-apparent; but the jealousy that the Paurava felt from this drove the Pandava into exile to the city of Varanavata. When there Duryodhana set fire to their house in the hope of destroying them; and as the bodies of a woman and her five sons were found in the ruins, the Pandava were believed to have perished.

They, however, returned, and settled at Indraprastha, where Yudishthra ruled wisely, and the people prospered; but, gambling with the Kaurava, he lost his all, kingdoms, brothers, himself, and wife. Dhrita Rashtra ordered the Pandava to be released and sent away, but they again gambled, and by the terms of the play they had to go into exile for 13 years. At its close, Yudishthra sent a messenger to Hastinapura to obtain restoration; but this being refused, the great battle recorded as the Mahabharata was fought, in which the Kaurava were all slain. Yudishthra became king, but he abdicated in favour of Arjuna's grandson. Yudishthra and Baladeva, after the Mahabharata, returned to Saurashtra, and after the death of Krishna they went northwards, and are supposed to have reached Greece.

YUEN, a dynasty of China, which succeeded the Sungh in A.D. 1271. They were Mongols, immediate descendants of Chengiz Khan, who adopted Chinese civilisation only in a very slight degree, and were soon expelled. The first emperor of the native dynasty, the Ming, which succeeded them in A.D. 1368, though a promoter of literature, was himself illiterate, having been a servant in a monastery. But the third sovereign of the line, who began to reign A.D. 1403, had a splendid library formed and several encyclopædic works compiled. He published an edition of the Sacred Books, which is known by the affix to their title of 'Tatreuen,' in full completeness.

YUG, Yuga, or Yoga signifies properly the conjunction, and sometimes the opposition of the planets. It is, however, more generally used, for signifying a long period of years, at the expiration of which certain phenomena or circumstances recur. The principal series of the yug made use of in present times in astronomical computations, are the Maha yug, Satya, Treta, Dwapara, and Kali yug. It is generally admitted that ancient Hindu astronomers invented their yug with reference to some of Jupiter and the Sun's conjunctions, in the beginning of the zodiac; and that more recent ones, with a view to lengthen their periods, have referred them to those of Saturn and the Sun. Modern European commentators have made great alterations in the epochs and durations of these yug, without changing their names. Yuga dina (sometimes written yugadia) means the anniversary of the day on which the current Maha yug, and any one of the four lesser yug, began, which anniversary is always noticed in the calendar. Telugu astronomers use sometimes the term yugadia for ahargana. Kala or cala, time, in its natural acceptation, is a term applied to a great variety of mathematical and astronomical subjects.—*Captain Warren, Kala Sankalita.*

YUGA, an age of the world. Hindus in their mythical cosmogony divide the age of the world into four yuga,—the Krita or Satya yuga, extending to

1,728,000 years; the Treta yuga, to 1,296,000 years; the Dwapara yuga, to 864,000; and the Kali yuga, in which we now live, and which they consider will last 432,000 years. The world in 1878 was in the year of the Kali yuga 4979. Hindu cosmogony reckons four yuga in every Maha yuga. A Maha yuga comprises 12,000 years of the gods, equal, according to the Vishnu Purana, to 4,320,000 years of mortals. One thousand of these periods is a calpa or day of Brahma = 4,320,000,000 of human years, comprising under it 14 Manwantara, or periods presided over by 14 successive Menu, after which there is a universal collapse (Maha pralaya) of all creation. In the present calpa or moon, six Menu have passed away, of whom the first was Svayambhuva, the present or seventh being Vaivasvata.

Bunsen regards the four ages of Menu as four states with successive interregna, which the Aryan Hindu race really passed through. The first age contains only general mythical representations of divine progenitors. The second period commences B.C. 2400 (2300) prior to the old settlement in the Panjab, on the Saraswati, ending B.C. 1900 (1800). The commencement of the third period was B.C. 1606 (1486), corresponding to the first year of the Kuru, and may have lasted 500 years, or down to B.C. 1107 (987). And he estimates the beginning of the Aryan settlement in the Saraswati district as not later than B.C. 2600 or 2500.

YUGAT-PRABHU. Sansk. Lord of the world.

YUG-SADDAN, or Yug-brasht, or Yug-byasa, in Hindu belief are persons who, by extraordinary pious pains, obtain miraculous longevity, prolonging their lives to some hundreds of years. As far as can be gathered, it is regarded by them as the faculty of drawing, by degrees, all the breath (or perhapst he principle of life, or the soul) into the upper part of the head, and thus continue for any number of years the aspirant may have previously determined on, or, as others say, in proportion to his piety, in a state of insensible absorption, exempt from the destructive operations of earth or water, but not of fire. The sect called Byragi or Viragi are apparently the most frequent and successful pretenders to this extraordinary power. Perhaps the following tale in Wilford's Egypt and the Nile may allude to the practice. On the banks of the Kali dwelt a Brahman, whose name was Lechayanasa, a sage rigorously devout, skilled in the learning of the Vedas, and firmly attached to the worship of Hari; but, having no male issue, he was long disconsolate, and made certain oblations to the god, which proved acceptable, so that his wife Saukriti became pregnant, after she had tasted part of the Charu, or cake of rice, which had been offered. In due time she was delivered of a beautiful boy, whom the Brahmans, convened at the jatakarma or ceremony on his birth, unanimously agreed to name Haridata, or given by the divinity. When the Sanskara, or institution as a Brahman, was completed by his investiture with the sacerdotal string, and the term of his studentship in the Veda was past, his parents urged him to enter into the second order, or that of a married man; but he ran into the woods, and passed immediately into the fourth order. Disclaiming all worldly connections, and wholly devoting himself to Vishnu, he continually practised the Samadhi yoga, or union with the deity by contemplation, fixing his mind so intensely on God, that his vital soul seemed concentrated in the Brahma Randhra, or pineal gland; while his animal faculties were suspended, but his body still uncorrupted, till the reflux of the spirits put them again in motion. Hindus assert that some Yogi have remained in this state for years, and the fanciful gradations are minutely described in the Yoga Sastra, and even delineated in the figures called Shat-chakra, under the emblems of lotus flowers with different numbers of petals, according to the supposed stations of the soul in her mystical ascent.—*Coleman, Mythology of the Hindus*, p. 426; *As. Res.* iii. p. 456.

YUH. Chin. Jade, nephrite.

Yashm, ... Pers. | Sutash, ... Turk.

This mineral is found in the long narrow valley of the Ooroo or Oru, a tributary of the Ningthe or Kyendwen, some 50 or 60 miles west of Mogoung. It is dug up by the Shan and Kakhyen races. It is found embedded in yellow clay. It is largely purchased by the Chinese in Burma for exportation to China, where it fetches an extravagant price, and is manufactured into cups, bracelets, etc. It is of the yuh stone that the Chinese form their waved emblem of longevity, specimens of which sometimes bring 100 dollars. Respectable Chinese at Amarapura represent this trade as amounting to from six to ten lakhs of tikals per annum. This is probably exaggerated. It is met with also in Fung-tien-fu (Shing-king), Lien-chau-fu (Canton), in Shan-tung, near Khoten, Karakash, Yarkand, and other places in Turkestan and Mongolia, in the rivers amongst the Siansk mountains, to the S.W. of Lake Baikal, in E. Siberia, and other places in Central Asia; also in New Zealand, Polynesia, and the United States. It is of various colours, white, blue, yellow, and green, and the milk-white and light green varieties are the most valued. Its hardness, weight, sonority, and peculiar sombre tint are the points on which the Chinese found their estimate of its value. It consists chemically of the silicates of magnesia and alumina, with varying quantities of chromium, and perhaps other metals, according to the tint of the stone. Philosophers and physicians have ascribed all sorts of properties to this mineral, which, however, as a medicinal substance for any purposes of pharmacy, can have no other effect than so much steatite or soapstone. The Chinese suppose it to possess humane, just, intelligent, brave, and pure qualities, presumed to be conveyed to the wearer. Those who wear it are said to be relieved from the claims of gravitation. Chinese jade articles have been dug up in Europe in connection with very ancient remains.—*Smith; Porter, M.B.; Nat. History of China; Yule's Embassy*, p. 147.

YUH-HWANG-TE, the pearly emperor, is one of the Chinese deities who is invoked in seasons of drought. He was the son of one of the kings, Kwong-Yim-Mew-Lok, and was canonized.

YUJ and Majuj, or Gog and Magog. See Alliteration.

YULE, Colonel HENRY, an officer of the Bengal Engineers, author of Fortification for Officers of the Army, 1851; Embassy to Ava, 1858; Cathay and the Way thither, 1866; Book of Ser Marco Polo, 1871 and 1875; Geography of the

Upper Waters of the Oxus, 1872. Henry Yule and Captain W. Gill, R.E., the River of Golden Sand, 1880. He was in charge of the Observatory at Aden in 1840; author of an account of the Khassya Hills, Bl. As. Trans., 1854; on Native Tree Bridges, Scandinavian Antiquities; Tremendous Falls of Rain at Cherrapoonji, ibid.; Translation of the Canal Grant of the Emperor Akbar, with Notes on the Western Jumna Canal, ibid., 1839, x. p. 113.—*Dr. Buist's Catal.*

YU-MUH, nomade wandering herds. They and the Tosang fowlers are variously interspersed throughout the military jurisdictions of extra-provincial China, and are administered more or less by military functionaries. The Tosang are to be found in Kirin, and Tsitsihar of the Manchurian provinces, and Urianghai; the Yu-muh are at Chang-kia-kau, and in Ili, Jeh-ho of the map, Tarbagetai, Urianghai, Kobdo, and Tibet. There are also Yu-muh between Tibet and the Kan-suh frontier, under the minister residing at Si-ning-fu, and on the borders of Shan-si in the Kwei-hwa command.

YUNAM, also called Nam-tso, a glacier lake in Lahoul. Glacier lakes are accumulations of water formed by one glacier obstructing the outlet of a higher one, and are of frequent occurrence. At times the wall of ice breaks away before the pressure of the swollen waters, when the lower lands become suddenly inundated, and the torrent rushes on with uninterrupted violence for miles, exercising a marked influence even down to the lower parts of the rivers. Two of the most elevated glacier lakes are the Deo-Tal, in Garhwal (17,745 feet), and the Nam-tso or Yunam, in Lahoul (15,570 feet).

YUNAN. HIND., PERS. Greece. Yunani, a Greek; also in India a system of medicine.

YUNNAN, a province of China, bounded on the north by Sze-chuen, on the south by Laos and Tonquin, on the east by Kwan-se and Honan, and on the west by the Burman empire; a small portion of the N.W. is bounded by Tibet. The surface of this province is estimated at 57,000 square miles, and its population at seven millions. Yunnan is the most south-westerly of the provinces of China proper, and contains a large number of Muhammadans. Marco Polo, whose book was written in 1295, describes the inhabitants of the principal city as a mixed assemblage of idolators, Nestorian Christians, and Muhammadans. The Muhammadans are said to be descendants of a body of 10,000 soldiers who were subsidized in A.D. 757 from Baghdad, and then sent to colonize Yunnan. The Muhammadans of Yunnan are styled Pan-thay by the Burmese, and Quay by the Chinese. Pa-thi in Burmese means any Muhammadan. Yunnan is rich in gold, silver, lead, iron, copper (132 mines), tin, mercury, arsenic, and gypsum. The galena of the Khyto mines yields 104 oz. of silver to the ton of ore. In 1850, eleven thousand tons of copper were raised, and silver of value 2½ millions of francs. Its silver mines at Loosoonphoo are worked by Muhammadans, there also called Pan-thay. In 1854, the trade with Burma was valued at half a million sterling. A great traffic exists between China and the Laos States, the Siamese, the Burman Shan States of Limmai Moni, and conducted by great caravans of ponies, mules, and donkeys.—*Sirr's China.*

YURISH. PERS. Assault, storm, invasion, commonly supposed to give the English or Irish cry 'hurush.'

YUSSER, a species of kerotophyte, which abounds in the harbour of Jedda, and has a most singular effect under water, from its gently waving motion when agitated by the tide. It is of a deep-black colour. On being taken up it is flexible, but when dry it becomes very brittle. One species, if touched with the tongue, stings severely.—*Valentia's Travels*, iii. p. 320.

YUSUF and Zulcika, a romance by Ahmedi Jami, taken from the story of Joseph and Potiphar's wife.

YUSUF KHAN, the founder of the Adal Shahi dynasty at Bijapur, A.D. 1501, was the son of Amurath II. of Anatolia, born at Constantinople. After a varied career, he was purchased for the bodyguard at Beder, where he soon raised himself to distinction, and in 1501, on the defeat of Dastur Dinar, he assumed independence.

YUSUFZAI, an Afghan tribe on the N.W. frontier of India, partly within and in part beyond the British border. It comprises the independent districts of Swat and Buner to the north of the Hazarno and Mahaban range of mountains, and the level plains to the south of the mountains lying between the river Swat and the Indus. Its boundaries are Chitral and Yasin to the north, Bajawar and the Swat river to the west, the Indus to the east, and the Kābul river to the south. The southern half of Yusufzai to the south of the mountains Hazarno and Mahaban is under British rule, and corresponds with the ancient district of Peukolaitis or Pushkalavati, called also Pahkalaoti. Its inhabitants are about 140,000 Afghans and 125,000 other tribes. Water is entirely absent in the northern half.

The Yusufzai quitted their ancient habitations between Ghazni and Kandahar, and, after various unsuccessful attempts to obtain a settlement in Kābul (at the time when Mirza Ulug, surnamed Kābuli, ruled that kingdom), finally established themselves in Swat and Bajawar, which at the period were governed by a dynasty of princes styled Sultani, who derived their lineage from Alexander the Great. Bajawar is certainly the Bazira of Alexander, and the celebrated rock of Aornos ought to be situated either in Bajawar or Swat, or the adjoining country of Kuttor. The Yusufzai possess, in addition to Swat and Bajawar, the tract situated between those provinces and the rivers of Kābul and Indus.

The Yusufzai tribes now hold all the districts to the north of the Lauddaey Sind, or eastern half of the Kābul river, though they were in Baber's time new comers. Their Ranizai division all reside beyond the British border in the Sani and Bar or Swat districts. Sani Ranizai was a refuge for malcontent criminals who made inroads, and in 1852 a force under Sir Colin Campbell obtained their submission; since which they have fulfilled their engagements.

Few even of the scores of mounds which cover the plains of Yusufzai have yet been in any way investigated, much less opened; and still fewer have been the attempts to search the hills which abut on this plain, although every attempt in this direction has been abundantly rewarded. Amongst the art remains spared by the Muhammadans, with their traces of Greek origin, are such as the

nude figure in chain armour, with the Macedonian chlamys, and the Greek head of Buddha, the chin of which only is Indian, found at Jamalgarhi.

The Yusufzai are revengeful, envious, avaricious, and obstinate, fond of liberty, faithful to friends, kind to dependents.—*MacGregor*, iii. p. 43.

YUTHIA or Ayuthia, in lat. 14° 18′ N., about 72 miles up the Menam river, was formerly the chief city of Siam, but the Siamese were driven from it in 1767 by the Burmese. The country produces cotton, sugar, pepper, teak, rosewood, and other items.

YUZ BASHI. TURK. A commander of 100 horsemen.

YUZ-BEGI, a centurion chief in Ush-Turfan.

Z

Z, the twenty-sixth and last letter of the English language, is also found in most of the modern languages of Europe, also in Arabic, Persian, and Urdu. It is a sibilant consonant, and is merely a sonant or vocal s. It is quite a characteristic distinction between the Sanskritic and Semitic dialects of India, that the former are destitute of the symbol and the sound of z, whilst in the latter there are no fewer than five modifications. In the Arabic, three letters have individual powers, but, with the exception of zh, which has the sound of the French j in jour, no difference of pronunciation is made in India. The Hindu races who do not use z are not able to distinguish between z and j, so that zor, strength, becomes jor, union; roz, day, is pronounced roj, for there is not any letter corresponding to z in the Sanskrit, Hindi, Mahrati, Gujerati, Bengali, Uriya, Telugu, Carnata, Tamil, or Malcalam. In the two Tamil dialects zh and l interchange, as in Pazham or Pallam, fruit.

ZAABUT. ARAB. A large, bag-sleeved, black or brown coloured robe, made of home-spun woollen, the garb of the Arab peasant, the hedge priest, and the darvesh.—*Burton's Mecca*, i. p. 24.

ZÁB, the Lesser Zab or Zei, is a river of Turkish Kurdistan. Its principal source is in the Legwin valley. It descends into the plains of Assyria. Athur, a ruined city near the mouth of the Upper Zab, now usually known by the name of Nimrud, is called Ashur by the Arabic geographers; and in Athur we recognise the old name of Assyria, which Dion Cassius writes Atyria, remarking that the barbarians changed the sigma into tau.

The Greater Zab is a river of Kurdistan, which is formed by several streams running through the Jawur mountains, and converging in the S. slope of the great Kurdistan chain. It enters the Tigris below Senn at Kushuf, in lat. 35° 59′ 30″ N. —*Muller's Lectures*, p. 233; *Malcolm's Persia*, i. p. 2; *MacGregor*.

ZA-BAING, a tribe in Burma. No trace of the Mon is left along the Yuma range, tribes of the Karen family being the exclusive holders of its inner valleys. Some of the very imperfectly described tribes on the eastern side of the Irawadi, to the north of the Ka-reh-ni, viz. the Za-baing, Khyen, etc., may belong to the older immigrants.

ZAB'H. ARAB. With the Muhammadans, killing an animal for sacrifice or food. The manner prescribed is to invoke the name of God, and cut the vessels of the throat so as to exhaust the blood. It is then halāl or lawful food, and in India the term halāl karna is used. In killing wild animals or game by shooting this is not necessary. The Jews similarly make their food lawful, and a certificate of it is attached to the carcase.

ZABTI. ARABO-HIND. Resumed property, or distrained, attached, or under arrest; also, in the Panjab, crops of the more valuable kind,—poppy, sugar-cane, etc.,—on which a special acreage is charged. In the Panjab, opium is not made a Government monopoly as it is in Bengal. The people are free to cultivate it if they choose, only it ranks as a Zabti crop, and has certain higher charges made upon it.

ZABUL, also Zabulistan or Zawulistan, was a province south of Balkh and Kābul, including Seistan, and having Ghazni for its capital, but extending from Ghazni westward to the river Helmand as far as Bāst (now in ruins), with Peshin on its south, the Kach Tobah Hills on its east, Ghazni on the N.E., and the Siah Koh on the N. The name is not now current.—*Bellew*.

ZABULON. The valley of the Zabulon is narrow and well wooded. It is cultivated; but although the soil appears good, tillage is not very general. In a two hours' walk from Nazareth, Seppown is reached. It is a small town upon a height near the entrance to the vale of Zabulon. From its situation it had gained an unhappy distinction in the wars of the Holy Land. 600 Christian knights were massacred in front of it by Jappadin.—*Skinner's Journey*, i. p. 140.

ZADAH. PERS. Born, a child. It is compounded, as Shah-zadah, a prince; Shah-zadi, a princess, etc.

ZAFFAR-NAMAH, the Persian name of a work, purporting to contain a conversation between Aristotle and Buzurjmiher. See Ashraf.

ZAFRAN-i-HADID. PERS. A sesqui-chloride of iron made by burying for ten days in the ground a composition of iron filings and sal-ammoniac; the damp of the earth causes the sal ammoniac to act on the iron.—*Honigberger*.

ZAGHRITAH, a shrill cry with which Arab women welcome their wanderers home. The Egyptian word is generally pronounced Zaghrutah, the plural is Zagharit, corrupted to Ziraleet. The classical Arabic term is Tahlil; the Persians call the cry Ki. It is used by women, and is formed by raising the voice to its highest pitch, vibrating it at the same time by rolling the tongue, whose undulations express now joy, now grief. The sound so gladdening to the returner, sends a chill to the stranger's heart. —*Burton, Mecca*, iii. p. 197.

ZAGROS, a name given by Europeans to the main range of mountains separating the elevated table-land of Central Asia from the valley of the Tigris; but the people do not know such a name. The Zagros range, through the hills of Kurdistan, unite with the Armenian mountains on the north. On the south it extends by the mountains of Luristan and Khuzistan. The drainage of the Zagros range to the westward and southward flows to the Tigris, and the Shat-ul-Arab is formed by the junction of the Tigris and Euphrates, the two rivers of Mesopotamia.

ZAHAR MOHRA. HIND. Any bezoar stone.

There are several of these substances, all of them reputed amongst natives of India to be capable of extracting poison from a poisoned wound, from a snake-bite or arrow-wound. That from Khatai is more opaque and pale-yellow coloured than that from Ladakh. The zahar mohra of Ladakh and of Suket is serpentine, a hydrate of magnesia. Whether as a bezoar or as common serpentine, or as calcined bones, zahar mohra applied to a snake-bite will absorb a small quantity of the poison; but common earth, always at hand, will do better. In the Panjab, serpentine is made into cups or bowls, which are supposed to crack and split if poison is put in them. In Europe a similar superstition prevailed as to Venetian glasses, and in the middle ages opal was believed to lose its colour at the sight of poison. A compound of magnesia is dug near Iscardo, in Bultistan, and there cut and turned into cups, plates, etc. It is supposed to have a wholesome effect on any fluid put into it, and to break should poison touch it. Zahar-tor, HIND., identical with zahar mohra; its meaning is poison antidote, from Zahar, poison, Torna, to break.—*Powell.*

ZAHT. In Burmese Buddhism, religious dramas of the higher order are called the Zaht gyee Tsé-bwe. They are ten in number, and are designed to show how Buddha in turn overcame all the deadly sins. Of these the Waythandaya is an affecting story, and prized for the beauty of its composition. The Weezaya Zaht, a secular play by the late Oo Hpo Nyah, is acted by all the Pwes (Pooays).

ZAILA and Tajowra. In 1839, after the capture of Aden, it was deemed necessary to secure command of the harbours of Zaila and Tajowra on the Donkali coast, ports in Africa, nearly opposite to Aden, and the principal outlets of the trade of Southern Abyssinia. Tajowra is a dependency of Zaila, and both places were subject to the Imams of Senaa, but during the revolutions at Senaa the chiefs of Zaila and Tajowra had assumed independence. Treaties were made, but Zaila and Tajowra subsequently fell under the government of the Turks.—*Treaties.*

ZAINAB, wife of Zaid, taken to wife by Mahomed. As Zaid was a slave, the transaction was not in accordance with the customs of the people, and no Muhammadan will defend the act.

ZAKARIYA-al-KAZWINI, son of Mahomed, son of Mahmud, was a native of Kazwin or Kasbin in Persia, author of the Asar-ul-Balad and Akbar-ul-Balad, a geographical compilation from the works of Istakhri, Ibn Haukul, and others. His works were written after the middle of the 13th century A.D., about A.D. 1263, A.H. 661, or A.D. 1273, A.H. 674. He also wrote the Ajaib-ul-Makhlukat and Gharaib-ul-Maujudat.

ZAKAT. ARAB. A tenth or tithe, a legal alms amongst the Muhammadans. It is obligatory on every Muhammadan to give annually a tenth or more of his property. The descendants of Mahomed are not allowed to accept zakāt or sadaqa. They are to be bestowed on pilgrims to Mecca, religious mendicants, debtors, beggars, poor travellers, proselytes. According to the Muhammadan religion, an alms is required to be given annually to the poor, of camels, oxen, sheep, goats, horses, mules, asses, gold, and silver, provided the property be of a specific amount, as 5 camels, 30 oxen, 40 sheep, 5 horses, 200 dirhem, or 20 dinar. The proportion is generally one-fortieth, or 2½ per cent., which is to be paid in kine or in money or other equivalent. The term means literally purification, and is metaphorically applied to a tax, as its payment is considered to purify and render legal the property on which it is paid. There are many different opinions among Muhammadan doctors relative to the proportion and mode in which this tax should be collected on property of various kinds, and amongst Muhammadans it affords a constant subject for vilification. The zakat of Ism or name is the prescribed offerings, or the attributes of the deity.—*Malcolm's Persia*, ii. pp. 249, 334.

ZALACCA, a genus of palms occurring in Malacca, Penang, Assam, and the Tenasserim Provinces. The leaves are employed as thatch and for baskets, etc.

Zalacca affinis, found at Malacca near Ching, where it is known under the name of Salak batool, which means the true salak.

Zalacca Assamica, *Wall.*, is a plant of Assam.

Zalacca conferta flourishes in very shady wet places in the great forests of Malacca, as at Ching and Katawn. It is the Asam-komber of Penang, and the Asam-paiah of the Malays of Malacca.

Zalacca edulis, *Remusat.* Z. Rumphii, *Wall.*, Calamus zalacca, *Roxb.* This tufted, short-stemmed palm has leaves varying in size from 18 to 20 feet in length, common in swampy places about Malacca, the Tenasserim Provinces, as well as in Burma. It is the Salak-komber of Penang. Its red scaly fruit is eaten by the natives. The light Selung boat in which the maritime Selung race of the Mergui Archipelago shoot over their waters, owe their buoyancy to the stems of the edible zalacca, which form their sides. These stems are as light as, and of the consistency of, cork, for which they are often substituted; and the Selung are skilful in uniting them together to serve instead of planks, so as to make an unequalled sea-boat, that floats on the waves like a swan.

Zalacca glabrescens grows in Penang, where it is called salak.

Zalacca macrostachya grows in marshy, damp, and exceedingly shady places at Ching near Malacca. It is the Rungum of the Malays.

Zalacca secundia grows in forests about Kuju in Upper Assam, the Mishmi mountains, and on the lower ranges of hills on the borders of Upper Assam.—*Seeman; Voigt; Mason's Tenasserim.*

ZAMAN SHAH was the son of Timur Shah, and grandson of Ahmad Shah. He meditated expeditions against India, but he never advanced beyond Lahore. He was defeated and blinded by Shah Mahmud, driven from the throne of Kābul, and for nearly half a century afterwards remained till his death a pensioner of the Indian Government at Ludhiana.

ZAMBESI, a river of E. Africa, which rises towards the west coast. It is navigable for 300 miles to the Kebrabasa rapid, and for other 300 miles above the rapid. Its valley is very unhealthy. Its enters the Indian Ocean in lat. 18° 51′ 40″ S., and long. 36° 18′ 30″ E.—*Findlay.*

ZAMBURUK. HIND. Wall pieces or small cannon, mounted on camels, and worked from off their backs.

ZAMINDAR. HIND., PERS. A holder or occupant of a landed estate. Zamindar was a term originally applied to hereditary Hindu chiefs,

but Muhammadans extended it to independent princes, like those of Udaipur and Jodhpur. In comparatively modern times, it has included persons holding assignments of the Government revenue, as well as district and village officers, and collectors of land revenue. In 1793 the Government of India, by an Act known as the Perpetual Settlement, recognised the zamindars and independent talukdars of Bengal, Behar, and Orissa as actual proprietors so long as they paid the Government revenue of nine-tenths of the fixed nett proceeds of the lands (Beng. Reg. viii. 1793, iii. 1794, v. 1795, ii. xxvii. 1803), and the same principle was afterwards applied to Madras (Mad. Reg. xxv. 1802, ii. 1806, iv. 1822). The Bengal settlement has been considered not only a great financial error, but also an injustice to the country.

Village landholders are distinctly recognised throughout the whole of the Bengal Presidency, except in Bengal proper, and perhaps Rohilkhand. They appear to subsist in part of Rajputana, and perhaps did so at no remote period over the whole of it. They are very numerous in Gujerat, include more than half the cultivators of the Mahratta country, and a very large portion of those in the Tamil country. They are almost extinct in the country south of the Nerbadda, except in the parts just mentioned. In all the Madras Presidency north of Madras itself, in the Nizam's country, and most of that of Nagpur, in great part of Kandesh, and the east of the Mahratta country, there is no class resembling them. This tract comprehends the greater part of the old divisions of Telingana, Orissa, and Canara. They are not mentioned in Sir John Malcolm's Central India, and are not known in Malwa. In Hindustan they are commonly called village Zamindars or Biswadars; in Behar, Malik; in Gujerat, Patel; and in the Dekhan and south of India, Mirassidar. The rights of property in the land is unequivocally recognised in the present agricultural inhabitants by descent, purchase, or gift.

The zamindari estates in the Madras Presidency have a revenue of Rs. 1,40,60,000, of which Rs. 51,32,990 is payable to Government as pesh kush or tribute. Arranging them according to their revenues, there are Vizianagram, Venkatagherri, Pittapur, Shivaganga, Ramnad, Kavetnuggur, Kalastri, Bobbili, Ettiapuram, Nedavole, and Baharzalli, Devarakota, Wyvur, Jeypur, and others. About the middle of the 19th century the zamindar of Bobbili refused the maharaja of Vizianagram his title of Munney Sultan, and his appeal was made to the Privy Council. Bobbili has been a noted place in its time. It is a zamindari of about twenty square miles in the Northern Circars, in the vicinity of Vizianagram, Visagapatam, and Chicacole, and the rulers have been amongst the leading men in that part of the country.

Zamindar is used in the Panjab only in the sense of a mere proprietor, and not, as in Bengal, to mean a wealthy landholder of a large estate. Also, in the Panjab and Sind, this is a designation of the ordinary cultivator. The zamindars or cultivators of the soil at Jell, as throughout Cutchi, are the Jat race, who there seldom moved abroad but on bullocks, and never unless armed. A Jat might generally be seen half-naked, seated on a lean bullock, and formidably armed with matchlock and sword; but to the north and west of Cutch Gandava, as also in Herat, Kandahar, and Kābul, the Jat are to be seen as itinerant artisans, like gypsies. — *Stirling; As. Res.* xv. p. 239; *Elphin. Hist. of India*, pp. 249, 422.

ZAMORIN, a titular chief of Calicut, the Samari, descendant of a royal family who ruled over territories now comprised in the greater part of the collectorate of Malabar. The title is also said to be a dialectal change from Sami Rama (Semiramis), also from Samudri or Tamudri, Sea-king. By a treaty of 18th August 1792, the zamorin agreed to act on the civil rules which the E. I. Company might introduce. Further changes were made by treaties of June 1793, in September 1794, and 15th November 1806, the last of which gave a consolidated allowance to the zamorin. Calicut town is on the Malabar coast; in lat. 11° 15¼′ N., long. 75° 47¼′ E. The zamorin, in 1513, sent a deputation to Portugal, and his ambassador, who turned Christian, was knighted, under the name of John of the Cross, by John III. On returning to India, he was banished from the zamorin's court. In 1532 he appears to have been installed as the fishermen's chief, as he headed a deputation of 85 of them to Cochin, soliciting the assistance of the Portuguese against the Muhammadans. The whole of the embassy are said to have become converts to Christianity. A Portuguese fleet was sent to their relief, and 20,000 are said to have immediately consented to be baptized. Ten years subsequently, Xavier instituted a church for these people. Its name, Calicut, is from Colicodu, a cock crowing, as Cheruman Permal gave his sword and all the land within cock crow of a small temple to the zamorin, who attained considerable power in the 15th century; but in the early wars of the Portuguese, the British, and the Muhammadans of Mysore, that high place was lost. Tipu Sultan destroyed the flourishing trade. There are many of the Tiar and Moplah race here. Calicut was the first port at which Vasco da Gama arrived. It was visited in 1494 by Pedro da Covilham. — *Horsburgh; Bartolomeo's Voyage.*

ZAM-ZAM, a well near Mecca, 7 feet 8 inches in diameter, and 56 feet deep, which tradition traces to the time of Hagar and her son Ishmael, as the spring that gushed forth to relieve their thirst. Its water is exported in little tins, being considered holy. It is milky in appearance, and is heavy to the taste. When a Sindi is seen to be in the agonies of death (sakarat), all present recite the shahādat or confession of faith. If water from Zam-zam be procurable, it is dropped into the man's mouth, as a traditional saying of the prophet informs his followers that it is a meritorious deed. In 1883, Mr. E. Frankland analyzed the water, and found it to be of the most abominable character. In fact, it is sewage more than seven times as concentrated as London sewage, and it contains no less than 579 grains of solid matters per gallon. Knowing the composition of this water, and the mode of propagation of Asiatic cholera by excrementitious matters, it is not to be wondered at that outbreaks of this disease should often occur among pilgrims to Mecca, while it would scarcely be possible to provide a more effective means for the distribution of cholera poison throughout Muhammadan countries. He

received from the consul at Jedda:—'The well is in Mecca; the water is regarded as holy, and large quantities are annually sent as gifts to all Musalman countries. Most of the Muhammadan princes, especially those of India, have keepers of the well, whose duty it is to send them annually water from the well.'

ZAMZAMA, or Bhangiwala, a gun at Lahore, 14 feet 4½ inches long, cast A.D. 1761, by Shah Wali Khan. The gun on the ramparts of Bijapur, cast at Ahmadnaggur by Rumi Khan, is of huge dimensions, that on the top of Gawilgarh is 27 feet, and one on the ramparts of Beder is 21 feet.

ZAN. PERS. A woman; hence zanana, women's apartments, the women of a family.

ZANGARIA or Dzangaria derives its name from the Zangar, a branch of the Kalmuk or Western Mongolians, who suddenly acquired great power in the 18th century. Their empire stretched E. and W. from Hami to Lake Balkash, and they invaded Tibet, and sacked its capital in 1717. But in 1757 they were overthrown by the Chinese, and the whole nation perished. The Upper Ili valley is called Kulja, and it is rich land. It was occupied by Russia in 1871 to 1880, when the inhabitants were not more than 100,000. The Zangaria revolt was followed by revolts of the Dungan and Taranchi, and numbers perished. Zangaria is the natural boundary separating the Central Asiatic Kulan from the Djigitai of the Mongolian Gobi, and the limit of distribution of the Saigak, the antelope of the depressed wastes, as also of the Djeiran of the mountain table-lands. At the present time, Zangaria is inhabited by the Burut or Kirghiz proper, and the Kirghiz-Kazak of the Great Horde, known under the collective appellation of Uisun. Among these there is a tribe called the Red Uisun, who assert themselves to be the remnants of a great and powerful nation. The Buruts and Uisuns are two distinct races. The Great, Middle, and Little Kirghiz-Kazak hordes form one Cossack family, distinct from that branch of the Kirghizes called Buruts by the Chinese, and Dikokamenni by the Russians. These two family groups differ in language, extraction, and customs.—*Valikhanof.*

ZANJIRA, also written Janjirah and Jinjeera, a Mahrati form of Jazirah, an island, but applied to a territory which extends along the western sea-coast of the Peninsula of India, between the Reodunda and Bankut rivers. About the year 1489, a party of Abyssinians, in India known as Sidi and Habshi, serving the Nizam Shahi dynasty, disguised as merchants, obtained permission to land three hundred boxes, each of which contained a soldier, and by their means they obtained possession of Dhunda Rajpur. It afterwards formed part of the Bijapur Adal Shahi kingdom, under whom, in the time of Sivaji, the government of S. Konkan was held by the admiral of the Bijapur fleet, who with his crews were all Abyssinians. Being hard pressed by the Mahrattas, the officers of the fleet seem to have offered their services to Aurangzeb, then at war both with Bijapur and the Mahrattas. Since that time, up to the years 1810 or 1815, they were engaged in constant wars by sea and land. The Sidi were more dreaded than all others on the pirate coast. The town and district of Jafarabad on the Kattyawar coast is a colony from Jazirah, from which it receives a governor.—*Clunes Itinerary Treatise.*

ZANNAR, Zennar, or Jannar. ARAB., HIND., PERS. A belt, a zone; the sacred thread worn by the Brahmans, Kshatriya, Vaisya, and artisan races of Hindus.

ZANONIA CLAVIGERA. *Wall.* A trailing plant of the Khassya mountains. *Z.* Indica, *Linn.*, Kyee-aa; BURM. The fruit is obscurely triangular, and having the flavour of the cucumber. It climbs to the top of the loftiest trees at Alwaye, 14 miles from Cochin. Its leaves are used medicinally. *Z.* zehneria, *Endl.*, Kyee-aa, BURM., a plant of Tenasserim. — *Voigt; Useful Plants; Mason.*

ZANSKAR, tributary to Indus, rises on the N. declivity of Bara-lacha pass, lat. 32° 47′ N., long. 77° 33′ E., runs N.W., W., N.W., N.E., N.W., N.E., into the Indus, a few miles below Leh. Length, 150 miles; receives the Trarap, 42; Zingchan Tokpo, 22 miles. The Zanskar district of Ladakh lies along the two great branches of the river of the same name. Zanskar town, near the Indus river, occupies the north slope of the main Himalayan chain parallel with Kishtwar on the south. Padum, the capital, is 11,592 feet above the sea; the territory is in lat. 33° to 34° N., and long. 77° to 78° E.—*H. f. et T.* p. 224.

ZANZIBAR, an island on the E. coast of Africa, in lat. 6° 9′ S., and long. 39° 14′ 10″ E., which gives its name to a territory on the mainland adjoining. It and the greater part of the eastern coast of Africa were conquered by the Portuguese in the beginning of the 16th century. Driven to despair by the tyranny of their rulers, the inhabitants of Mombassa, in 1698, invited the assistance of the imam of Muscat, who expelled the Portuguese, and put many of them to the sword. It was not till 1784, however, in the time of Ahmad bin Said, that the Muscat Arabs established a permanent footing in the island of Zanzibar; and even for many years afterwards, till the accession of Syud Said in 1807, the subjection of Zanzibar was little more than nominal. In 1746, the people of Mombassa threw off allegiance to Muscat, elected Shaikh Ahmad as their sultan, and maintained their independence till 1823, when, fearing the aggression of the imam, Soleiman bin Ali, the sultan of Mombassa, with the consent of the people, put himself under British protection. A treaty in 1824 to that effect, however, was not ratified. The Zanzibar dominions extend from Cape Delgado about 1100 miles northward along the coast. In 1844, Syud Said of Muscat appointed his son Syud Khalid as his deputy and successor in Zanzibar, and his son Said Thowayni in Muscat. On their father's death, after arranging for a payment for Zanzibar, a dispute upon arose regarding the nature of this payment, and whether it implied the dependence of Zanzibar on Muscat. The matter was referred to Lord Canning, who awarded the payment of 1000 crowns in perpetuity, but declared the independence of Zanzibar. In 1879, the population consisted of British, 24; Indian Muhammadans, viz. Khojah, 2974; Bohra, 1066; Mehman, 367; and Hindus, 954; Parsees, 26; Goa Portuguese, 240; French, 39; German, 13; American, 8, with other Asiatics and Africans under the protection of the British and French.

Zanzibar or Sangbar means Negro land, and was a term in early times applied to the coast of Africa, S. of the equator, but is now restricted to the island and littoral ruled by an Arab family

of the Shiah sect of Muhammadans. The Zanzibar dominions comprise that portion of the coast included between Magdashoa in 2° north latitude, and Cape Delgado in 10° 42′ south latitude. Beyond them, to the north, are the independent Somali tribes, which extend almost to the Red Sea, where they meet the Dankali race; and on the south they are bounded by Mozambique. The extent of coast under the dominion of the Sultan of Zanzibar is about 1100 miles, but the most valuable parts of his sultanate are the islands of Zanzibar (containing the capital of the same name), Pemba, and Monfia. The first is situated at a distance of from 20 to 30 miles from the mainland. It contains none but small streams. It is a lovely island, of unbounded fertility; the mango and other trees grow to an enormous size, oranges grow in profusion everywhere, and pine-apples of large size and good flavour grow wild all over the island. The Arabs grow cloves to the neglect of other produce. The soil is a rich vegetable mould, formed by decayed plants on a bed of coral. Many rare and valuable plants grow here wild; the sarsaparilla, the copal tree, spices of all sorts, sugar-cane of immense size, and rice. Zanzibar Island at its greatest breadth is 46 miles long by 18 miles wide, but its general breadth is 8 or 9 miles, with a general height of 100 feet. Mathurdas Khetsee, a Hindu merchant of Zanzibar, at the close of the year 1872, mentioned in the Rast Goftar that Kilva and the surrounding districts were the principal seats of the slave trade. In Zanzibar and the neighbouring places, the trade had been monopolized by Arabs, as British subjects are restrained there. At Mozambique, Vibu, and the Guja territories, under the Portuguese rule, the trade flourished. On the north, the trade was still moderately carried on between Burawa and Central Madagascar, and down to Soffala. British influence had succeeded in making this trade a matter of risk, but traders carried on the slave trade under cover of the ivory trade. Bhattia, Banya, Khojah, and Borah had the greatest share in the slave trade. A large number of Borah merchants reside at the principal towns. The Indian merchants go to Samu, Mombassa, Zanzibar, Kilva, Queelowa, Mozambique, Madagascar, Soffala, and Kurmani. In 1872 there were only from 5 to 10 Khojah, about 75 Bhattia, and a very large number of Damaun and Diu Banya in Mozambique. Madagascar, called Bookin by the natives, contained about 1000 Borah and Khojah. Up to 1872, they had their families with them. There were about five Parsees in Zanzibar, about the same number in Mozambique, two or three in Vibu, and one or two others here and there, all of Damaun and Diu. They put on Parsee dress, and were strongly suspected of having some participation in it. The Cutchi Banya generally reside in Mombassa and Lamu, while the Damaun and Diu Banya live in Mozambique and the southern territories. The vessels from Damaun and Diu proceed direct to the African coast with these merchants. They live for about 30 to 35 years, collect money, and return to their native country to get married. The Cutchi Banya and Bhattia also go to Africa without their wives or families, but they keep African mistresses with them in their houses. These women generally came from Bookin and central towns of Africa, where they were to be had for 100 or 150 dollars. They have white skins and handsome complexions. In Mozambique, Vibu, and other Portuguese towns, Portuguese women, and sometimes European women, live with these Hindu merchants. Native firms correspond with Hindu and Khojah firms in Bombay. Parents sent their children in their minority to Zanzibar to get an insight into the intricacies of trade. Indian merchants have pushed in so far that not a single town is without at least one of them. From 10,000 to 20,000 slaves were said to pass yearly through Kilva on their way to the various parts of the Sowahili, and to Arabia.

ZAPANIA NODIFLORA. *Linn.*

Lippia repens, *Spreng.* L. sarmentosa, *Spreng.* L. nodiflora, *Rich.*	Verbena cuneata, *Willde.* V. nodiflora, *Linn.*
Chhoto okra, . . BENG.	Wukkun, . . . SIND.
Bhukokra, BENG., HIND.	Podu talli, . . . TAM.
Chota okra, . . . ,,	Bokkena, . . . TEL.
Baleia ithi kani, MALEAL.	Nela pippali, . . ,,

An annual plant, one of the Verbenaceæ, native of the E. and W. Indies, N. America, Australia, and Polynesia, grows on streams and banks of rivers in South India. Its leaves and young shoots are used in medicine.—*Voigt.*

ZAI'ATOS. SP. Shoes. A Spanish word which seems to have been derived from the same source as the Chappal, HIND., the Sapate, TAM.

ZAR-AFSHAN, literally gold scattering, is one of the principal rivers of the khanate of Bokhara, known also as the Kohik, and formerly Sogd Kuwan. It rises about 175 miles to the east of Samarcand, its principal source being an immense glacier, extending 35 miles up a ravine, and here called the Macha-darya. It flows westerly towards Samarcand, which it passes a few miles to the north. At the Chobanata Hill it separates into two channels, which re-unite near the Russo-Bokharian frontier. The island thus formed, called Miankal, is the most fertile portion of Russian Turkestan. Gold is washed for at Hissar, also at Urmitan. It receives the Fan-su, several brooks, the Kishtut-su. The Zar-afshan district is one of the subdivisions of the Russian province of Turkestan. It includes all the territory annexed by the Russians from the Amir of Bokhara, except the Jezikh district, and is divided into the Samarcand and Kata Kurghan districts, the headquarters being at Samarcand.—*Trotter, Central Asia; Vambery, Bokhara*, xxxii.

ZARAFSHANI KAGHAZ. HIND. Gold-sprinkled paper, which the natives of India use when addressing people of rank.

ZARANG, the chief town of Sijistan, from which the lake formed by the Helmand and the Farrah is often called the lake of Zarang. It is the Zarrah of the maps. The Drangæ are supposed to be the Zarangæ. The vicinity affords good pasturage, and wheat and barley in sufficient quantities to be sent to Herat. Lat. 32° 15′ N., long. 61° 20′ E.—*Ferrier, Journey*, p. 429.

ZARATHUSTRA SPITAMA, the Zoroaster of Europe. According to Chevalier Bunsen, he appeared in the reign of Vistaspa, a Bactrian king, towards the year 3000 B.C. Firdusi, in the Shah Namah, gives his era as during the reign of Gushtaspi. Another author makes him a contemporary of Moses. Spitama was a Shoshyanto or fire priest, the son of Purushapa, and was born in Bactria, which he calls in his writings Berekdha

Armaiti. Ragha, now Rai, near Teheran, has been fixed on as his birthplace, but for no other reason than that it was a city governed by the priests alone. The only one of his children mentioned in his writings is his daughter Purudusta. He was a Zarathustra or high-priest, and hence was known to the Greeks as Zarastrades and Zoroastres, whence the Latin and English Zoroaster. The modern Parsees call him Zarodusht. He declared that he had a divine mission to expel all idolaters and promote the practice of agriculture, and he founded what is known as the Masdayasna or Parsee religion, which is simply the old faith of the primitive Aryan, reformed by his hymns and writings. He laid the foundation of that Zend literature which, Dr. Haug shows, required centuries for its growth, and was complete B.C. 400. He is expressly called 'the celebrated in Airyana Vaejo,' or Aryan home. To the supreme deity, whom his predecessors, the Shoshyanto sect, had worshipped as the Ahura or the living ones, who were opposed to the Deva of the idolaters, he applies the term Ahuro-Mazdao, 'that Ahura who is called Mazdao or almighty.' This name denotes a conception of the deity almost identical with the antediluvian Elohim or Jehovah. The word appears in the cuneiform inscriptions as Aburamazada, in the times of the Sassanian kings as Ahurmazd, and in modern Persian as Ormuzd; and this one God not only rewards the righteous, but punishes the wicked. A separate evil spirit of equal power with Ahuramazda, and always opposed to him, is entirely strange to Zarathustra's theology, though the existence of such an opinion among the ancient Zoroastrians can be gathered from some later books, such as the Vendidad. 'Spentomainyus has created the light of the day, and Angromainyus the darkness of the night; the former awakens men to their duties, the latter lulls them into sleep. Life is produced by Spentomainyus, but extinguished by Angromainyus, whose hands, by releasing the soul from the fetters of the body, enable her to go up to immortality and everlasting life.' In course of time 'Spentomainyus was taken as a name of Ahuramazda himself; then of course, Angromainyus, by becoming entirely separated from Ahuramazda, was regarded as the constant adversary of Ahuramazda, and thus the dualism, God and Devil, was called forth.'

ZARBAFT. HIND. A thin fabric of silk and gold thread woven together.

ZARMANOCHEGUS, Zarmanochidus, or Zarmanochagus, a native of Broach or Cambay, who accompanied the embassy from the king of Pandiya to the emperor Augustus at Antioch. He went with Augustus to Athens, and there committed self-immolation by burning himself in the presence of the emperor. Zarmanochegus was, however, preceded by Calanus in the self-immolation. Until the time of Plutarch, the tomb of Zarmanochegus was to be seen, and was known as the Indian's tomb.—*Strabo*, lib. xv. p. 1048; *Pennant's Hindustan*, i. p. 69; *Barth.*

ZAYAT. BURM. A public shed or portico for the accommodation of travellers, loungers, and worshippers, found in every Burmese village, and attached to many pagodas. It corresponds to the dharm-sala of Northern, and the choultry or chattrum of Southern India.—*Yule's Embassy*, 23.

ZAYDEE, BURM., a Buddhist pagoda, is from the Pali Chaitya, and is also called payah. The greatest of these religious structures are the Shoay-dagon in Rangoon, the lotus shrine Shoay Maw-daw at Pegu, Shoay San-daw for the sacred hair at Prome, and the Maha-Myat-Mune temple in Mandalay. A prominent part of the ritual in dedicating a payah is to pour water drop by drop on the ground.

The Kyaik-htee-yoh is on a hill 3500 feet high. On its summit are several rock boulders, surmounted by little shrines. The Kyaik-htee-yoh boulder is huge, and rests on a projecting rock separated from the rest of the hill by a deep chasm. The boulder stands on the extreme verge of the bare rock, and hangs over it as if a gust of wind or a few extra pounds added would make it topple over, and crash down the dizzy height far away into the green valley below.

The Maha-Myat-Muni payah has a huge brass image of Gautama, which in the year 1784 was brought from Akyab. Pagahn is said to have 9999 Zaydee. A memorial line says:—

'Hlè win-yoh than ta-nyan nyan
Pagahn payah poung.'

'The cartwheel's creaking strains
Pass Pagahn's storied fanes.'

The three great Buddhist works of perfection in Burma are—(1) assistance afforded to parents and relations; (2) great offerings made in this and former existence, coupled with strict observance of the different enactments of the law; (3) benevolent dispositions towards all beings indiscriminately.

The ten great virtues are, liberality, observance of the precepts of the law, retreat into lonely places, diligence, patience, fortitude, wisdom, benevolence, truthfulness, indifference.

The five renouncings are,-the giving up, for holiness' sake, of wife, goods, life, one's self.

ZEA MAYS. *Linn.* Indian Corn, Maize.

Mokka, ... BENG.	Jagung, . . . MALAY.
Pyoung-boo, . . BURM.	Yavanala, . . . SANSK.
Bollah, ... CAN.	Muwa iringu, . . SINGH.
Mukka juari, . . DUKH.	Makka-cholum, . TAM.
Kukri . . . of KANGRA.	Makka-jonna, . . . TEL.

The Zea genus of plants belongs to the natural order Panicaceæ. The word is identical with the Greek Ζεια, but the Greek plant was a species of Triticum or Hordeum, and Zea is entirely American. The Zea plants are monœcious. There are six or seven varieties of Zea mays, red and white. The American variety has been extensively distributed throughout the Himalaya hills, and the plains of the N.W. Provinces, and the Panjab; in parts of the Himalaya, to 7500 and even 8000 feet; on the Chenab and Ravi. In some parts of the Panjab it forms a staple food of the people, ground, and made into bread, but in India a large proportion of it is eaten roasted in the ear. The stalks of the plant contain a considerable quantity of sugar, which has been economically manufactured in the crystalline state in several of the South American provinces.

In the preparation of the soil for maize cultivation, plough and cultivate as for any other dry crop; the better the land is ploughed and worked the more satisfactory will be the results. Manure the soil freely, apply sheep and cattle dung, decayed leaves, ashes, brickyard dust, tank mud which has been thoroughly exposed, wild indigo, madder leaves, etc. No crop pays better for a

thorough manuring. The manure should be spread evenly over the land before the last ploughing takes place. To prevent crows, squirrels, etc., destroying the seed, tar it before sowing. Take 1½ pints (½ Madras measure) of hot water, and add to it ½ of a pint (¼ ollock) of tar, mix together, and after cooling, pour the solution through about 20 measures of seed. After dusting with sand, ashes, or sawdust, to prevent the seeds adhering together, the grain is ready for sowing. Sow 30 lbs. per acre, in rows 24 inches apart; plant the seed about two inches deep and about nine inches apart; during growth keep down the weeds; cultivate the rows with hand-hoes and ploughs. For harvesting, when the outer covering of the cob begins to open, and the seed is hard and glazed, it is time to commence gathering. If the season be favourable, do not be in a hurry to peel the cobs. If stored with the skins on, they must be frequently examined, lest they should heat or mould. The straw is excellent fodder, and should be carefully stored for consumption during the dry season. It is most economical to chaff or steep the straw before giving it to farm stock. The cobs may be shelled when dry, and the grain used as food; or it may be used in feeding horses, cattle, or sheep. Direct experiments have proved that, weight for weight, it produces better results than gram. Mr. Robertson thinks the maize crop is one worthy of much attention in British India. —*Jameson's Report; Eng. Cyc.; Stewart, Panjab Pl.; Mason; O'Sh.; Madras Experimental Farm.*

ZEBAYER ISLANDS, in the Red Sea, comprise seven volcanic islets, viz. Jibbel Zebayer, about three miles long, the most easterly, has three hills, the central of them in lat. 15° 3½′ N., and long. 42° 18′ E.. It is about 600 feet high, and the southern hill is a cone. The other islands are, Centre Peak, Saba, Connected Island, Saddle Island, Table Peak, Rugged Island, and Haycock Island, each about half a mile in length, and of moderate height. In July and August 1846, Saddle Island was observed in action, dense masses of sulphurous smoke arising from it.—*Findlay; Dr. Buist; Bom. Geo. Trans.*, 1852.

ZEBU, the Bos Indicus of Linnæus, is the B. domesticus, B. Indicus, B. zebu, and B. Taurus zebu of authors, and has many English synonyms, but that of Brahmany bull is the most usual. They occur domesticated throughout India, all Southern Asia and the Archipelago, and are largely used for draught.

Naturalists have generally made two divisions of cattle, the humped kinds of tropical countries, the zebu or Bos Indicus of India, and the common unhumped cattle, the Bos Taurus. As with dogs and pigs, the domestic cattle are certainly from more than one stock. Humped cattle were domesticated in Egypt as early as the 12th dynasty, that is, B.C. 2100, and they have greater osteological differences from common cattle than the fossil species of Europe, B. primigeneus, longifrons, and frontosus, have from each other, and their habits also differ. The zebu of India seldom seeks the shade, and never goes to stand knee-deep in the water like the cattle of Europe. They run wild in parts of Oudh and Rohilkhand, and can maintain themselves in a region infested by tigers. They have given rise to many races. The European breeds of humpless cattle are extremely numerous, perhaps fifty in number. The genus Bos readily yields to domestication. The three fossil species are the parents of those of Europe; and the B. Indicus, the yak, the gayal, the arni, and the bubalus, have all been domesticated.—*Z. in Indian Field; Jardine, Mammals of India; Darwin, Eng. Cyc.* See Bibos; Bovidæ.

ZEB-un-NISSA BEGUM, daughter of the emperor Aurangzeb, was a poetess. She wrote a diwan. Her literary takhallus or nom de plume was Makhfi, meaning anonymous.

ZEDOARY, Zedoaria.

Zerukbad, Jadwar, ARAB.	Zerumbad, . . . PERS.
Shuthi, ... BENG.	Karchura, . . SANSK.
Tien-chuh-kan-kyang, CH.	Hinhura-pecalliculla, SIN.
Kutchur, ... DUKH.	Cedoaria, ... SP.
Zedoaire, ... FR.	Pulang-kalangu, . TAM.
Zittwer, ... GER.	Kichili-gadda, . . TEL.
Capur-cachary, . HIND.	

The zedoary of commerce is the root of a plant which grows in Malabar, Ceylon, Cochin-China, etc. There are three distinct kinds, supposed to be the roots of Curcuma zedoaria, *Roxb.*, and C. zerumbet, *Roxb.* The best zedoary comes from Ceylon, where C. zerumbet grows. The odour of zedoary is fragrant, and somewhat like that of camphor; the taste biting, aromatic, and bitterish, with some degree of acrimony; was formerly employed in medicine. Zedoary is imported into Bombay from China and the Malabar coast.—*O'Sh.; Faulkner; Powell; Milburn.*

ZEHNERIA CERASIFORMIS. *Stocks.* One of the Cucurbitaceæ, a plant with a climbing or creeping stem. It grows in Gujerat, the Panjab, and Sind; is good fodder for cattle, and acts as a lactagogue.—*Murray.*

ZEND is described to have been the Achæmenian or old Persian. Until recent years, orientalists have differed as to the existence of any such language as that called Zend; but the prevalence of this language is now universally admitted. The term Zend means commentary or explanation, and was the name of the comment which accompanied the Avesta, the law, or the word. What name the language was known by in ancient times has not been discovered. It is a twin-sister of Sanskrit; and the common source of the two languages is proved not only by an unmistakeable similarity, but by the many myths and semi-divinities which are common to the oldest writings in both these languages. In what country and from what language these two great Aryan tongues arose, is a matter for conjecture.

The original texts of the Avesta were not written by Persians, as they are in a language not used in Persia; they prescribe certain customs which were unknown to Persia, and proscribe others which were current in Persia. They were written in Media by the priests of Ragha and Atropatene, in the language of Media, and they exhibit the ideas of the sacerdotal class under the Achæmenian dynasty.

If grammars and lexicons of this language ever existed, they have not come down to modern times. Translators have nothing to work upon but the texts themselves. The traditional school seeks to explain them by the writings of later times in other languages; the comparative school approaches them through the old Vedic Sanskrit. According to this school, 'the Avesta and the Veda are two echoes of one and the same voice, the reflex of one and the same thought; the Vedas therefore are both the best lexicon and the

best commentary to the Avesta.' At the head of the former school stands Spiegel, and Burnouf was the great founder of the latter. Neither of these methods can be implicitly trusted. There is no disputing the close affinity of the Vedic Sanskrit and the language of the Avesta, but these two languages must have existed apart for a long time before the Vedas and the Avesta were composed. They show a great difference in the spelling of words which were once identical; and if the forms of words changed, their significations could hardly have been exempt from variation, of which two examples are convincing proofs,—Sanskrit, Deva, a god; Zend, Daeva, a demon; Sanskrit, Asura, a demon; Zend, Ahura, a god.

The period when the Zend texts were collected and formed into the Avesta has not been ascertained; but it seems possible to trace a Zoroastrian literature back to the 3d century before Christ; and although some portions of the Avesta are evidently later in time than the rest, 'no part of them can belong to a later date' than the 4th century A.D. The date of the collection must have been long posterior to the composition of the component parts. How and when these productions first made their appearance is a matter for pure speculation.

The Zend-Avesta is divided into two parts. The Avesta, properly so called, contains the Vendidad, the Vispērad, and the Yaçna. The Vendidad is a compilation of religious laws and of mythical tales; the Vispērad is a collection of litanies for the sacrifice; and the Yaçna is composed of litanies of the same kind, and of five hymns or Gathas written in a special dialect, older than the general language of the Avesta. The Khord-Avesta or small Avesta is composed of short prayers, which are recited at certain moments of the day, month, or year, and in presence of the different elements. The proper form of the name is Avesta Zend, a softened form of Avesta wa Zend, *i.e.* text and comment or explanation. Its Pehlevi form is Apistak, the Pastak and Pastakum of the Mahrati and Telugu.

A Pehlevi translation of the more important books, supposed to have been made under the Sassanidæ (A.D. 235-640), is extant, and a Sanskrit translation of the Yaçna, made about the end of the 15th century by Nerio Singh.

Anquetil de Perron in 1771 made a translation of it; Burnouf gave a version of the first and ninth chapters of the Yaçna in 1833; and Martin Haug, of the Gathas in 1858-60, and other fragments.

The Zend-Avesta was printed by Westergaard in 1852-54, and printed and translated by Spiegel in 1851-58, and translated in 1880 by Professor James Darmesteter.

The Gatha are songs; the Yaçna consists of prayers, hymns, etc., relating to sacrificial rites, and intended to be used during the performance of sacrifice. Several of the Gatha are ascribed to Zoroaster, who, according to Berosus, lived anterior to B.C. 2000. Haug supposed the Zoroastrian Gathas to be as early as the time of Moses. The first Fargard of the Vendidad must have been composed before the migration of the Medes southward from the Caspian region.—*G. Rawlinson*, ii. p. 322; *The Sacred Books of the East.*

ZENGABAD, the country of the tribe of Karim Khan, king of Persia, whose dynasty was overthrown by the Kajar tribe, that of the present king. When they came first into these parts, they were nomades, but they are now settled in villages. There are a great many besides established in Zengabad, and many in the Pasha of Baghdad's army. Their clans are—Kerwei of the Feili tribe, Lor, Sedeni, Goorzei.

ZENOBIA, queen of Palmyra, was wife of Odenathus. After her husband's death, A.D. 266, she assumed the throne as regent for her sons. She appeared in military attire at the head of her troops, and shared in their labours both on horseback and on foot; but she ambitiously endeavoured to subdue all Syria, Western Asia, and Egypt. The emperor Aurelian overthrew the city and took her prisoner, and in his triumph she was shown to all Rome, covered with costly jewels, fettered hands and feet with shackles of gold. She was led by a golden chain before the chariot of Aurelian along the Sacred Way. All Rome gazed on the Arab princess. She passed the remainder of her life with her sons, in the neighbourhood of Tivoli, near Hadrian's villa, on an estate which still bore her name when Pollio wrote her history. She is accused of having yielded to the promptings of jealousy, and of having consented to the death of her husband, because he seemed to prefer Herodes, his son by a former wife, to Herennianus and Timolaus, his children by herself. See Palmyra.

ZIARAT. Pilgrimage to a Muhammadan saint's shrine; also the visiting of the grave of a Muhammadan relative, or other deceased person, on the third day after burial, when the Koran is read, and prayers are recited and offerings made in expiation of the sins of the deceased. This visit is also called Tija, the third (day), and Phul-Charhana, spreading flowers. Places for these minor pilgrimages are the tomb of Ali, called Mash'hid-i-Ali, at Nejeff, near Kufa, the shrine of Imam Husain at Karbela, and that of Imam Raza at Mash'hid in Khorasan; but all the numerous Imam-zadehs and tombs of holy characters throughout the country are thus visited. The minor pilgrimage is termed a Ziarat, as distinguished from the Hajj, or great pilgrimage to Mecca.

ZIBELLINA, the Khatun Bulugan, became wife of Arghun Khan; she had been married to Abaka, but on his demise, according to the custom of the Mongols, she passed to the urda of her stepson, Arghun Khan, Kablai Khan's great nephew. Zibellina, the Khatun Bulugan, was a lady of great beauty and ability. On her death, Arghun sent Marco Polo for another wife out of the Mongol tribe of Bayaut, but Arghun died before the lady, Kuka-Chin, was brought, and she passed to Ghazan, the nephew of Arghun, for Arghun had been succeeded by Kai-Khatu, his brother.—*Quart. Rev.*, July 1868.

ZIEGENBALG, BARTHOLOMEW. Ziegenbalg was the first Protestant missionary in India. He sailed for India in 1705, and for a time returned to Europe in 1714. In 1719 he finished his Tamil translation of the Bible, which had occupied him 14 years. George I. of Great Britain wrote two letters to Ziegenbalg, on the 23d August 1717 and 23d February 1727, congratulating him on his success. He wrote a Genealogy of the South Indian Gods, printed at Madras 1869.

ZIFFAF. ARAB., HIND. Leading a bride home.

ZIFT-i-RATB and Zift-i-Yabis. PERS. Ratinaaj and catrain are varieties of resin, colophony, and dried tar. Zift-i-Rumi, HIND., also dried tar; Zift-i-Ratab and Zift-i-Yabis, pine resin or tar, etc. Zift-Rumi, asphaltum or black bitumen, is a deep-black, pitch-like solid; hard, softens at 150°, and melts above that; highly inflammable, believed to be the result of the natural distillation of petroleum. It is produced in abundance in Barbadoes and Mesopotamia. It is a valuable lacquer for the protection of iron or tinned iron vessels. A lump rubbed over the heated metal, coats it with a hard, adhesive, brilliant coat, which resists most of the common corrosive agents.—*Powell.*

ZIKKIR or Zikr. ARAB. Reminiscences; amongst Muhammadans, repeating the attributes of God or the creed, also devotion towards the deity; calling on the Lord; the term by which the Rafai darveshes designate their religious services. The zikkīr of the Maulavi darvesh commence their religious service with part of a mystic poem, using soft music and plaintive love songs. See Jalal-ud-Din.

ZILHUJ or Zilhujja, the last month of the Muhammadan year.

ZILLAH. PERS. In India, a district or local division of a country. In British India, each province is divided into zillahs or districts, under collectors and magistrates or deputy commissioners, with joint or deputy assistants, and extra-assistants. In the Bengal Presidency, these districts are in most cases grouped into divisions, each under a commissioner supervised by a revenue board or financial commissioner. English counties average 1000 square miles in extent. In India they are much larger. In Bombay, for instance, collectorates average about 6000 square miles, and Kandesh is supposed to be 15,000 square miles. Plural, Zillahjat.

ZIMB. ABYSS. Dog-fly.

T'zirah, Zabub, AR., HEB. | Glossina morsitans, LAT.

The zimb insect is translated hornet in Exodus xxiii. 28; Deuteronomy vii. 20; Joshua xxiv. 12. It is difficult to conceive that Isaiah could have in view any other insect when he says—'The Lord shall hiss for the fly that is in the uttermost part of the rivers of Egypt' (Isaiah vii. 18). The original word rendered fly in the translation is Zabub, and, as Bruce observes, 'the Chaldee version is content with calling this animal simply Zabub, which signifies the fly in general, as we express it in English. The Arabs call it Zimb in their translation, which has the same general signification. The Ethiopic translation calls it Tsaltsalya, which is the true name of the particular fly in Geer, and was the same in Hebrew.' Bruce has given a graphic account of this fly. The Latin Asilus and the Greek οἶστρος were probably only different pronunciations of the same term, Hatsirah, as this fly is called both by Moses and Joshua. Dr. Harris gives as names of flies, the Oreb of Exodus viii. 21; the Zebub of 2 Kings i. 2, 3, 6, 16, and Psalm cxviii. 12; the T-sira of Exodus xxiii. 28, Joshua xxiv. 12, Deuteronomy vii. 20.—*Kirby and Spence, Entomology; Harris, Nat. Hist. of the Bible*, p. 139.

ZIMMAY is the northernmost Shan State tributary to Siam, and lies about three weeks' journey from Moulmein, and forty days' from Bangkok. The prince or chief of Zimmay is nominally subordinate to the king of Siam, to whom a yearly tribute of very trifling value is paid. In reality, however, the control exercised from Bangkok has been of the slenderest kind, the Zimmay people accepting the suzerainty of Siam merely as one degree less objectionable than that of the Burmese, whom they dislike very strongly. Various reasons exist for the inefficient control exercised from Bangkok, not the least being the length and difficulty of communication between Bangkok and Zimmay, and the disturbed condition of Zimmay and the adjacent Shan States.

ZINAT-un-NISSA, daughter of the emperor Aurangzeb. Kazi Shahab-ud-Din, following Khafi Khan, states that in her young days she became attached to the young raja Sahoo, and the two young people having been allowed to grow up together, on one occasion, Aurangzeb, observing them in the same room, forbade all future intercourse. Aurangzeb died at Ahmadnaggur in the Dekhan, where he was provisionally interred (somp gya), and his remains were afterwards finally placed in a tomb on the hill at Roza near Dowlatabad, and over his remains is a very simple cupola or dome. At Aurangabad, however, is the splendid tomb of this daughter. The author of Travels of a Hindu states that the Zinat-Masjid, more commonly called the Kunari-Masjid, or Maiden's Mosque, was built by Zinat-un-Nissa, the virgin daughter of Aurangzeb, who, like Jahanara, remained unmarried. The princess who built it having declined entering into the married state, laid out a large sum of money in the above mosque, and on completing it she built a small sepulchre of white marble, surrounded by a wall of the same, in the west corner of the terrace. In this tomb, he says, she was buried, in the year of the Hijira 1122, corresponding with the year of Christ 1710.—*Tr. Hind.* ii. p. 312.

ZINC, Speltre.

Peh-yuen, Peh-t'ung, CHIN.	Sang-fusri, . . IT., SP.
Sung busri, . . . DUKH.	Tambaga-putih, MALAY.
Spelter, ... DUT.	Schpaater, . . . RUS.
Zinco, Chinck, . IT., SP.	Tutanagam, . . . TAM.

Zinc was first mentioned by Paracelsus in the 16th century, under the name of zinetum. Zinc is found in the state of an oxide, but principally as a sulphuret (blende), and an impure carbonate (calamine). From both ores it is first converted into an oxide by the process of roasting, and then reduced to the metallic form by the aid of carbonaceous matter, when it may either be fused or sublimed. Until purified by a second distillation, it contains as impurities, small portions of other metals, as iron, copper, arsenic, etc. In British India, zinc is used in forming alloys; of these, there are alloys with lead, chiefly used on account of the facility with which it can be turned or filed. 1 lb. of copper to 2 oz. yields a red-coloured ductile alloy; with 6 oz. is common pot-metal, brittle when warmed.

ZINGIBER CASSUMUNAR. *Roxb.*

Z. purpureum, *Roxb.*	Z. Cliffordii, *Andr.*
Ban ada, . . . BENG.	Karu allamu, . . . TEL.
Vana-adrakam, . SANSK.	Kura pasupu, . . ,,

Grows throughout British India, and has a strong camphoraceous smell. Rhizoma much larger than that of common ginger; smells camphor-like, tastes hot and bitterish; now very little used.—*Roxb.*

ZINGIBER OFFICINALE. *Roscoe.*

Amomum zingiber, *Linn.*

Zinjabil, Zingabil, ARAB.	Ischi, ... MALEAL.
Khyen-seing, . . BURM.	Zinjabil, ... PERS.
Kan-kiang, Peh-kiang, CH.	Adraka, . . . SANSK.
Adrak, Ada, . . HIND.	Ammu inguru, . SINGH.
Sonth (dry ginger), ,,	Inji, ... TAM.
Alia, ... MALAY.	Allam, ... TEL.

The native country of the common ginger plant is not known; but it is cultivated in all the warmer parts of Asia and on the slopes of the Himalaya up to 5000 feet. Its flowers are small, whitish-purple, but it very rarely seeds; the roots are greatly increased. It is planted at the commencement of the rains in beds of about six feet square, and in a rich cultivated soil. The planting consists in dividing part of the green root, which the natives first soak in a mixture of cow-dung and water; it is then planted about two inches deep and about one foot apart. It requires a great deal of water, and to be kept clear of weeds. When the stalks dry, the ginger may be taken up; although it is sometimes left in the ground for a couple of years. It must be watered during the dry season, from October or November up to February and March.—*O'Sh.; Roxb.; Mason; Smith.*

ZINGIBER ZERUMBET. *Roscoe.*

Amom. zerumbet, *Willd.* | Zingiber spurium, *Kon.*
Butch, . . BENG., HIND. | Walinguru, . . SINGH.

Found in the island of Ceylon and in the woods about Calcutta; the taste of the root resembles that of ginger, but is bitter as well as aromatic. This plant is much used for cataplasms and fomentations, but is not taken internally. It is not used in medicine by European practitioners.—*O'Sh.* p. 648.

ZIRCON. Its pellucid varieties are gems; jargoon is of a dull green; hyacinch or jacinth has a peculiar red tint; and there are yellow and blue tints, but these are rare. The more pellucid and colourless zircon, from its exceptionally high refractive power, approaches even the diamond in brilliancy.

ZIZYPHUS, a genus of plants of the natural order Rhamnaceæ. Besides those noticed below, several species occur in S.E. Asia, viz.:—Z. albens, *Roxb.*, China; glabra, *Roxb.*, Chittagong; incurva, *Roxb.*, Dehra Doon; jujuba, *Lam.*, British India, Archipelago; lotus, *Lam., Pers.*, N. Africa; Mirzaporensis, *Royle*, Shergotti; nitida, *Roxb.*, China; Roxburghiana, —? Chittagong; rugosa, *Lam.*, British India.

ZIZYPHUS FLEXUOSA. *Wall.*

Beri, ... CHENAB.	Barj, Ban, . . KANGRA.
Sinjli, Simil, . KANGRA.	Ber-relnu, . . . RAVI.

A large shrub or small tree, has a girth of 4 to 5 feet; it grows in N.W. Himalaya, not uncommon at places from 2400 to 6500 feet, from the Ravi to near the Indus.—*Cleghorn; Stewart.*

ZIZYPHUS GLABRATA. *Heyne.*

Zizyphus trinervia, *Roxb. Fl. Ind.*

Ran-bor, ... MAHR.	Karukuva, . . . TAM.
Kurkatta, . . . TAM.	Kakupala, . . . TEL.

This moderate-sized tree grows in the Peninsula of India. In the Bombay Presidency it is most common in cultivated lands and in alluvial soil on the banks of rivers. In Coimbatore, trees would yield 12-inch planks, but it is commonly a moderate-sized tree. Its timber, of a light-brownish colour, is excellent, hard, and close-grained, and takes an excellent polish. The bark affords a quantity of kino-like gum both by exudation and by decoction.—*Wight; Gibson; Voigt.*

ZIZYPHUS JUJUBA. *Lam.* Jujube tree.

Z. trinervia, *Roth.* | Z. sororia, *Schult.*
Z. Mauritiana, *Wall.* | Rhamnus jujuba, *Linn.*

Zruf, Ussli suddir, ARAB.	Bidara, ... MALAY.
Kul, Budri, . . BENG.	Elentha, . . . MALEAL.
Hyl-bin, Hzoe, . BURM.	Perin todali, . ,,
Elanji mara, . CAN.	Maha-debara, . . SINGH.
Gullmara, . . . ,,	Ellendi, ... TAM.
Ber, ... HIND.	Regu manu, . . . TEL.

This tree is found everywhere in the south and east of Asia. There are several varieties in the Panjab, Z. hortensis, Z. hysudricus. It is the Pomum Adami of Marco Polo. Its wood is tough, strong, and durable, is used for carpentry, well curbs, well wheels, and ploughs, and for making charcoal. By grafting and cultivation, it affords a large fruit. The fruit of the wild kind is dried and powdered, as was done with the lotus of the Lotophagi. This powder in Arabia is called Suve koon nebek, in Persian Arud-i-kinar, in Hindi Ber choonee. The bark is used in the Moluccas as a remedy for diarrhœa; the root, with some warm seeds, in infusion in fever. The lozenges, and thickened mucilage called jujubes by the confectioners, are prepared from this and from the Z. vulgaris, a native of Syria, Persia, and Hindustan. A variety with long fruit, described by Dr. Wallich, is called in Bengal Narikeli kool. Its reddish-coloured round fruit is about the size of a large olive, and is used in chatnies and pickles. The uncultivated fruit when nearly ripe tastes like a crab-apple; it is a small sour berry.

ZIZYPHUS NUMMULARIA. *W. and A.*

Birar, ... BEAS.	Malla, Kokni ber, PANJ.
Jar-beri, . . . HIND.	Karkanra, . . PUSHTU.
Jand-ber, . . JHELUM.	Birosa, . . SALT RANGE.
Jarori, ... PANJ.	

This small thorny shrub grows in N.W. India, and abundantly in the Panjab. It is used for hedges, and its bark as a tanning substance. It is eminently characteristic of a dry climate, being common in the most desert and rainless districts of the Panjab. Its fruit is a small red drupe the size of a pea, and considered by natives cool and astringent, useful in bilious affections.—*Powell; Thomson's Tr.* p. 305.

ZIZYPHUS ŒNOPLIA. *Mill.*

Zizyphus napeca, *Roxb.*	Erra-minya-wel, . SINGH.
Kan-hzee, . . . BURM.	Koattay maram, . . TAM.
Pen-lay-hzee, . . ,,	Paringi, ... TEL.

This shrub is common in Ceylon, in Bengal, and in the Peninsula of India. Dr. Gibson had never seen it in the Bombay Presidency, but as a climber; and Wight says if used at all at Coimbatore, it can only be for small ornamental work. The bark affords a good deal of kino, and dyes leather red. Fruit eaten by the natives, its taste being pleasantly acid, and a great favourite with the thirsty traveller, and mice are fond of it. Its leaves are eaten by the lac insect. A decoction of the bark of the fresh root is said to promote the healing of recent wounds.—*Roxb.*

ZIZYPHUS VULGARIS. *Lam.*

Kandika, ... BEAS.	Kokan ber, . . JHELUM.
Fitni, Pitni, Ber, HIND.	Amlai, ... SUTLEJ.

This common wild fruit tree grows in almost every jungle in British India. It is cultivated by

Muhammadans round their tombs. The fruit is astringent, but sometimes of a pleasant subacid flavour,—eaten chiefly by the poorer classes and wild animals. The fruit is oblong, containing a stone, and bears twice in the year, the best crop about January. After this is over, the tree is pruned, by cutting off nearly all the smaller branches. A second crop succeeds on the new wood in the rains, but, from being full of maggots, is not eatable; even in the cold weather very little of the fruit is free from this insect. The flavour is somewhat that of a fresh apple, and the fruit when large and fine is by no means to be despised. Dr. Riddell succeeded best by budding from a good tree on a common stock raised from seed. It will bear well in two or three years, but requires care and watering at first. A fine gum lac is produced from this tree. The cocoon of the wild silk-worm is often found attached to it. It is common at many places in the Panjab Himalaya, especially towards the west at from 2000 to 4000 feet, and in Kashmir to 6000 feet. It also occurs in the Salt Range, and is occasionally found in gardens in the Panjab. The fruit is small and sour, but is eaten.—*Stewart; Riddell.*

ZIZYPHUS XYLOPYRA. *Willd.*

Z. elliptica, *Roxb.*	Z. orbicularis, *Schult.*
Z. caracutta, *Roxb.*	Rhamnus xylopyrus, *Retz.*
Z. rotundifolia, *Roth.*	
Sooti, ... BOMBAY.	Gatte, ... TEL.
Gumun mara, . . CAN.	

This small thorny tree grows in the hot dry parts of Ceylon, and throughout the south of India, and can always be recognised by the pale colour and softness of the under-surface of its leaves. It is most common below the ghats in Canara and Sunda, but it never grows to a very large size. It is common in every forest on the coast of Coromandel. In a good soil it grows to be a pretty large tree, with a tolerably erect trunk; but in general it is found in the state of a large straggling shrub. Cattle eat the leaves, young shoots, and fruit. The kernels taste like filberts, and are eaten by the natives. The wood of the largest trees is much esteemed by the natives, being yellowish or orange-coloured, very hard and durable, and at the same time not very heavy. The wood is used for implements, and its round fruit is employed in the arts, being much used by shoemakers to blacken leather and to make blacking.

ZOBEIDAH, wife of Harun-ur-Rashid, authoress of the Arabian Nights. She is buried at Baghdad. A pine-apple spire rises over the tomb.

ZODIAC. The following are the Sanskrit names of the signs of the zodiac, with the months and the corresponding astronomical periods:—

Sign.	Hindu Month.	d.	h.	m.
Mesha (Aries),	Vaisakh,	30	22	12·8
Vrisha (Taurus),	Jyesht,	31	9	40·8
Mithuna (Gemini),	Ashadh,	31	14	39·2
Karkata (Cancer),	Sravan,	31	11	16·8
Sinha (Leo),	Bhadra,	31	0	52·0
Kanya (Virgo),	Aswin,	30	10	56·8
Tula (Libra),	Kartik,	29	21	38·8
Vrishika (Scorpio),	Margashirsh or Agrahayan,	29	12	9·6
Dhanus (Saggitarius),	Paush,	29	8	21·2
Makara (Capricornus),	Magha,	29	10	54·4
Kumbha (Aquarius),	Phalgun,	29	19	21·6
Mina (Pisces),	Chaitr,	30	8	8·4
Total (according to the Parasara Siddhanta), ... ,		365	6	12·54

The Hindu astronomers know the Greek names of the signs, which, however, have never been brought into ordinary use, viz. Kriya, Tauru, Jituma, Kulira, Leya, Parthona, Juka, Korpya, Tauxika, Akokero, Hridoga, Isthusi.

Hindu astronomers have divided the zodiac into 27 equal parts, called lunar mansions, of 13° 20′ each. Their names are—

Aswini.	Magha.	Mula.
Bharani.	P. Phalguni.	P. Ashadha.
Krittika.	U. Phalguni.	U. Ashadha.
Rohini.	Hasta.	Sravana.
Mrigasiras.	Chitra.	Dhanishtha.
Ardra.	Swati.	Sata-bhisha.
Punarvasu.	Visakha.	P. Bhadrapada.
Pushya.	Anuradha.	U. Bhadrapada.
Aslesha.	Jyeshtha.	Revati.

According to Mr. Colebrooke, at the epoch of the Vedas the summer solstice was in the middle of Aslesha, the 9th lunar mansion; therefore Regulus was half a lunar mansion + 9°, that is 15° 40′, east of the summer solstice at that time. On 1st January 1859, the long. of Regulus was 147° 52′ 30″. Hence Regulus was at that date 57° 52′ 30″ east of the summer solstice. The summer solstice had therefore retrograded through 42° 12′ 30″ = 42°·208 since the epoch of the Vedas. And as the equinoxes and solstices move backward on the ecliptic at the rate of 1° in 72 years, it must have occupied 70 × 42°·208 = 3039 years to effect the change. Hence the age of the Vedas was 3039 on 1st January 1859, or their date is B.C. 1181, *i.e.* the early part of the 12th century before the Christian era.—*Archdeacon Pratt in Beng. As. Soc. Journ.* No. 1 of 1862.

ZODIACAL LIGHT. This, in the Red Sea and in Bombay, is far brighter than in England. Flashes of light, coruscations of the aurora borealis, in pyramidal form, would exactly describe the phenomenon. It varies, however, greatly, and often for some days together is scarcely visible.—*Burton's Mecca*, i. p. 307.

ZOHAK, a ruined city 9 miles from Bamian, built solidly with great skill and taste, and of burnt bricks. Abul Fazl thinks it was a fortress. Masson regards it as a religious structure.—*MacGregor*, p. 728.

ZOHAK, a mythical king of Persia; according to tradition, he came from Arabia.

ZONAR. HIND., PERS.

Poita, Poitu, . . BENG.	Yajnopavita, . . SANSK.
Janeo, Janar, . . HIND.	Janavi, ... ,,
Janwez, ... MAHR.	Jhandiam, Zendiam, ,,
Pavitra, ... SANSK.	Yadnu-pavita, . ,,

The zonar is regarded by the Brahmans as of sacred import; and they do not consider an individual as fully member of his class until he has assumed this symbol. Some writers call this the Brahmanical, priestly, or sacerdotal cord; but it is worn by the Brahman, Kshatriya, and Vaisya castes, by the Bed or herbalists of Bengal, by the five komsallar or artisan castes of the Dekhan, carpenters, goldsmiths, coppersmiths, blacksmiths, and stone-cutters, and also by the Parsee Zoroastrians. The zonar, however, is different for each of the races who wear it. It is imposed with solemnity, whence the three castes are termed Dwija, or twice-born. The investiture, with its accompanying formulæ, is considered to indicate the regeneration of the individual. The rite is applicable to all the three superior castes, or the Brahman, Kshatriya, and Vaisya, to each of

whom the term Dwija is appropriate; although, as the two latter are considered to be extinct, it now signifies the Brahman only. The cord of the Brahman should be made of cotton, that of the Kshatriya of a kind of grass, and that of the Vaisya of woollen thread. The investiture of the first should take place between the ages of five and sixteen; of the second, between six and twenty-two; and of the third, between eight and twenty-four. If delayed beyond the latter period, the individual is considered degraded from his caste. An essential part of the ceremony is the communication of the Gayatri or holiest verse of the Vedas. Various ceremonies are attendant upon Hindu boys between infancy and the age of eight years. After that age, and before a boy is fifteen, it is imperative upon him to receive this sacred thread, which, after a variety of preliminary ceremonies, is thus performed. The priest first offers a burnt sacrifice, and worships the salagrama, repeating a number of prayers. The boy's white garments are then taken off, and he is dressed in yellow or red, and a cloth is brought over his head, that no Sudra may see his face; after which he takes in his right hand a branch of the vilva, Ægle marmelos, and a piece of cloth in the form of a pouch, and places the branch on his shoulder. A poita of three threads, made of the fibres of the suru, to which a piece of deer's skin is fastened, is suspended from the boy's left shoulder, falling under his right arm, during the reading of the invocations. The father of the boy then repeats certain formulas, and in a low voice pronounces three times the Gayatri. It is communicable to all three, and is the following: 'O'm! Bhurbhuvă ssuvâha, O'm! Tatsa vit'hru varennyâm; B'hargo devâssyâ dhimahi dhiyo yonaha pracho dayath. Om! earth, air, heaven, O'm! Let us meditate on the supreme splendour of the divine Sun; may he illuminate our understanding.' After this the suru poita is taken off, and the real poita, or sacred thread, put on. During this ceremony the father repeats certain formulas; the suru poita is fastened to the vilva staff, shoes are put on the boy's feet, and an umbrella in his hand. The receiving of the poita is considered as the second birth of a Hindu, who is from that time denominated twice-born. A boy cannot be married till he has received the poita. The sacred thread must be made by a religious Brahman. It consists of three strings, each 96 hands (48 yards), which are twisted together; it is then folded into three, and again twisted; these are a second time folded into the same number, and tied at each end in knots. It is worn over the left shoulder (next the skin, extending half-way down the right thigh) by the Brahman, Kshatriya, and Vaisya castes. The first are usually invested with it at eight years of age, the second at eleven, and the Vaisya at twelve. The period may, from special causes, be deferred; but it is indispensable that it should be received, or the parties omitting it become outcastes. Colonel Tod, describing a gift to the Saiva temple of Eklinga, mentions that in return, the donor, who was the prince of Mewar, received lessons of morality, was initiated into the mysterious rites of Siva, and finally was invested with the triple cordon of faith (tin purwa zonar) by the hands of the sage, who became his spiritual guide, and bestowed on his pupil the title of regent (dewan) of Eklinga. When the Carthaginian gained the battle of Canna, he measured his success by the bushels of rings taken from the fingers of the equestrian Romans who fell in that memorable field. Akbar estimated his by the quantity of cordons (zonar) of distinction taken from the necks of the Rajputs, and seventy-four and a half 'man' are the recorded amount. To eternize the memory of this disaster, the numerals 74½ are, amongst the Rajput race, tilac, or accursed. Marked on the banker's letter in Rajasthan, it is the strongest of seals, for the sin of the slaughter of Chitore is thereby invoked on all who violate a letter under the safeguard of this mysterious number. Something like the zonar was ordered in Numbers xv. 38, in the fringes to be attached to the Arba bamforth on his breast, and which every Jew still wears.—*Tod's Rajasthan*, i. pp. 225, 328; *Cole. Myth. Hind.* p. 154; *Wilson's Hindu Theatre*, p. 163; *Moor's Hindoo Pantheon; Chow-Chow.*

ZONARIA PAVONIA. *Ag.* The Turkey feathered zonaria is a beautiful sea-weed, one of the Fucaceæ. It grows in all seas, attached to rocks, shells, etc. It resembles the expanded tail of the peacock.—*J. A. Murray.*

ZOOLOGICAL GARDENS were formed in Madras by Surgeon-Major Balfour in 1856. The collection comprised an aviary, snakes, the orang-utang and others of the monkey tribe, lemurs, armadilloes, bears, hyænas, tigers, the last given by Lord Harris. It was in connection with the Government Central Museum which he established in that city. The animals were afterwards removed to the People's Park in that city.

ZOOPHYTE, from the Greek Ζωον, animal, and Φυτον, a plant. The characteristic example of this class of creatures is to be seen in the coral, and authors divide them into

I. Protozoa, including Infusoria, Foraminifera, and Spongiadæ.

II. Polypifera, including the Hydræ, Sertularia, and Pennatularia.

III. Echinodermata, or sea-urchins and star-fishes.

The Protozoa are subdivided into Rhizopoda and Infusoria. The Amibæ, Foraminifera, and Noctilucæ are three orders of Rhizopoda. The Infusoria exist in all waters. The Ganges annually transports them to the ocean, to the extent of six or eight times the size of the Great Pyramid of Egypt. And the waters at a depth of 22,000 feet between the Philippines and Marianne Islands yielded 116 species.

The Polypifera, the polypi, correspond with the polype of science and the acalephous zoophytes of Cuvier. In nearly all the polype, the sexes are separate. They are arranged into the classes Sponge, Alcyonidæ, Zoantharia, Discophora, and Ctenophora.

The name is from the Greek πολυπους, meaning many-footed. The name is sometimes applied in a restricted sense for the genus hydra, but it usually comprises the animals of all zoophytes of the genera actinia, astrea, caryophyllea, corallium, hydra, isis, madrepora, meandrina, oculium, pocillopora, porita, sertularia, tubipora, and others.

The sponge animal lives at the bottom of the sea, and consists of a mass of light elastic tissue. Over three hundred species are known, amongst them are the feather, fan, bell, lyre, trumpet, distaff, peacock tail, and Neptune's glove sponge.

River sponges are irregular sandy masses, piled on plants and solid bodies in fresh water. The sea sponge is found in the Mediterranean, Red Sea, Mexican Gulf, and eastern seas, attached to rocks at from 5 to 25 fathoms deep. In the Red Sea, the Arabs dive for them and sell them in Egypt and at Aden. The Spongia, Calcispongia, Halispongia, and Spongilla constitute a group of which the constituent structure is known. The Geodia, Cœloptychium, Siphonia, Myrmecium, Scyphia, Endea, Halirrhoa, Happalinus, Cnemidium, Jerea, and Teuthium constitute another group, depending on characters of surface and general figure.

Some species of polypi live in large companies, and secrete a habitation or basis, to which the term polypidom has been applied; others live apart, like the hydra, floating about separately in the water, or, like the anemone, fixed one by one to the rocks. They have attracted the attention of the most learned naturalists from the time of Aristotle to the present day. The bright-red substance of the polypidom of the Corallium nobilis is the red coral of commerce, which, after pearls, for ornamental jewellery is the most precious product of the sea. It occurs chiefly in the Mediterranean, where it is dredged for. Sicilian coral has fetched as much as £10, 10s. the ounce.

The polyps are propagated by eggs, by buds, and by self-division. The polypidom of Tubipora musica of the Indian Ocean, is composed of a series of bright-red calcareous tubes, like those of an organ.

The Madrepora abound near the islands of the Indian and Pacific Oceans, and cover the banks and reefs near the Australian shores, particularly M. muricata, *Linn.* It is used for ornament, and is the Corne de Dame or Char de Neptune of the French.—*Newton's Levant*, p. 293; *Hatchett; Royle; Figuier; Madras Ex. Jur. Rep.*

ZORAPUR, a suburb of Kurnool, on the right bank of the Tumbudra river. General Cunningham supposed it to be the old town of Zora or Jora, as it answers to the Choliya or Joriya of Hiwen Thsang. In 1839, Alif Khan, the nawab of Kurnool, was dreaming of rebellion, and on being detected, he took up a position here with his mercenaries. He was defeated, and sent as a prisoner to Trichinopoly, where he was assassinated by one of his own dependents.

ZORAPUR, a town near the left bank of the Kistna river, usually called Beder Zorapur, because it is occupied by the Berder or Beder race. It is a feudatory chiefship of Hyderabad, in the S.W. part of the Hyderabad dominions. It is held by a Beder chief, with a portion of his tribe, and until the latter part of the 18th century the kingdom of Mysore contained several principalities of the Beder race. It is surrounded by rocky hills, and is a perfect site for a predatory race. The Beder chief joined in the rebellion of 1857-59, and, on being captured, he shot himself.

ZORAWAR SINGH, a Sikh general who commanded an expedition sent from Kashmir by Gulab Singh in 1839. After taking Ladakh and Iskardo, he marched up the valley of the Indus into Gnari, a province of Tibet, and captured Gurtok, its capital. His force was inconsiderable, and he wrote in vain for supplies and reinforcements. These were not easily furnished across the many intervening ranges of snow-capped mountains; winter was now approaching, and Zorawar Singh fortified for himself a cantonment near Gurtok, when a Chinese and Tibetan force surrounded him, and cut off his supplies. His detachment was thus overpowered, and himself slain. About 120 miserable Sikh fugitives found their way, half-frozen, across the Niti pass into the British province of Kamaon, and told the tale. This occurred in the winter of 1842, at the very time when the British force of Kābul was similarly overpowered by the Afghans.—*Prinsep's Tibet*, p. 22; *Cunningham's Sikhs*, p. 256.

ZOR-KHANAH, or Palaistra, where wrestling and athletic feats are practised, called in India talim khana.

ZOROASTER, the first of a dynasty that ruled in Babylon from B.C. 2235 to 2011, a period of 224 years, during which there were seven successors. From the Armenian edition of Eusebius, in the Chaldæan lists of Berosus, the name of one Zoroaster is known to us as a royal name. It is that of the Median conqueror of Babylon, who vanquished the realm and city of the Chaldees, and founded the second Babylonian dynasty in the year 2234 B.C. See Kissa-i-Sanjan.

ZOROASTER. See Zarathustra Spitama.

ZU, in Arabic means having or possessed with.

Zu-ul-Jalal, possessed of dignity.

Zu-ul-Faqār, the two-edged sword of Ali, which was said to have been given to Mahomed by the angel Gabriel. Zu-ul-Karnain, two-horned, a title adopted by Alexander the Great, who claimed descent from Jupiter Ammon. It was also adopted by Seleucus Nicator, but his reasons are not known. It was supposed to be meant to indicate that the power extended from east to west.

Zawi or Zui and Zi are the oblique cases of Zu. Sallatin Zui-ul-iqtadar, powerful princes. Zi-iqaida, the last month of the Muhammadan year.

Zu-l-Junna, the name of Husain's steed, meaning a winged wolf.

ZUHRA. ARAB. The planet Venus.

ZULIKHA, wife of Pharaoh. Her passion for Joseph is described in the Persian poems of Nizami and Jami.

ZU NAWAZ or Dhu Nawaz, surnamed the Lord of the Pit, from his throwing Arabs who refused to accept Judaism into a pit of fire.—*Sale's Koran.*

ZUTTU. TEL. The scalp-lock of hair worn by each man of the Hindus, called Kudami in the Tamil country.

ZYE. PUSHTU. A son, also written Zoe and Zai, answering to the Scotch Mac, the Irish O, the Arabic Ibn and Wald. All the Durani tribes have names ending in zye. According to Elphinstone, there are nine of these tribes,—the Populzye, which is the largest; Alleko-zye, Barukzye, Achik-zye, Nur-zye, Yusuf-zye, Husain-zye, Ali-zye, and Ishaq-zye, the two last being the smallest.

ZYGÆNA, hammer-headed shark, a curious shark with a head like a hammer, according to an Englishman's imagination, but like a buffalo's horned head, according to the Burmese. The genus Zygæna belongs to the sub-class of fishes Chondropterygii, Order II. Plagiostomata. First sub-order, Selachoidei, Fam. 1. Carchariidæ, Group B. Zygænina.

Zygæna Blochii, *Cuv.*, Archipelago.
Z. malleus, *Risso*, all seas.
Z. tudes, *Cuv.*, E. and W. Indies, Archipelago.
Z. tiburo, *Linn.*, Atlantic, Archipelago.
Z. mokarran, *Rappell*, Red Sea.

ZYGOPHYLLACEÆ, the bean capers, a natural order of useful plants, comprising in British India the genera fagonia, peganum, sectzenia, tribulus, and zygophyllum. Zygophyllum simplex, *Linn.*, and Z. coccineum, *Linn.*, camel-fodder plants of the Panjab, Sind, and Cutch, called in Sindi Aletthi and Putlani.—*J. A. Murray.*

ZYMOOSHT are a small but brave tribe of Afghans, numbering about 5000 fighting men, some of whom are well mounted. They inhabit a valley leading from Western Miranzai onward, towards the crest of a range called the Paiwar Kothul. Their country of right belongs to the Kābul kingdom. They were usually ready to combine for mischief with the Tooree and Orakzai, and to threaten Miranzai. They hold some land in the plains, which holding affords some pledge for their good behaviour. See Khyber.

GENERAL INDEX

FOR ALL THE THREE VOLUMES.

Detailed Indices for 'Birds,' 'Boats,' 'Ships,' and 'British India' are given at the end of this General Index, and at the end of the Second Volume are Indices for 'India,' 'Insects,' and 'Mammalia.'

A

Aal vulli kelangu, Tam., Janipha manihot.
Ababel, Hind., Swallows, Martins, Swifts.
Abadat, a Bedouin tribe.
Abagasus. See Bactria, 224.
Abasa, sister of Harun-ur-Rashid.
Absi, Hind., Mirabilis jalapa.
Aba Sin, the Indus.
Abbass. See Khalifah, Persia.
Abdals. See Chahl Tan.
Abdhut. See Mendicants.
Abd-ul-Kadar Ghilani. See Muhammadanism; Sufi.
Abdullah, father of Mahomed.
Abdullah-ibn-Abad. See Ibadiyah; Imam.
Abd-Ullah-ibn-ul Makaffa. See Bidpai.
Abdul Malik-Avenzoar.
Abdul Muttalib, grandfather of Mahomed.
Abdul Razak—Ormuz.
Abd-ul-Wahab. See Bedouin.
Abd-ur-Rahmanzai. See Afghanistan.
Abd-us-Shams, Arab., Turnsol.
Abercrombie. See Egypt.
Abhayagiri. See Pallonarua.
Abhi-angana, Tam., Tel., Bathing.
Abhidana Ratnamala. See Halayudha Bhatta.
Ab-hul, Arab., Juniper berries.
Ab-i-balad. See Khuzistan.
Abies. See Coniferæ; Ecidium; Ægiceras.
Ab-i-garm. See Hot Spring, 112.
Ab-i-ma, also Ab-i-Panj, the Oxus.
Abir; Karkam, Pers., Saffron.
Ablak-maina, Hind., Sturnus cineraceus.
Abnoos, Arab., Diospyros ebenum, D. melanoxylon.
Abor. See Bor-Abor; Kachar; Kolita.
Aborigines. See Chandala; Hindustan, 79.
Abpura Hill—Jetwa.
Abroma strictus. See Fibres.
Absin-ul-Fil, Arab., Colocasia esculenta.
Abu-Abdullah. See Idrisi.
Abu Bakr, father of Ayasha.
Abu Hurayra. See Sufi.
Abul Fida Ismail, Hamawi, a learned king of Hamai in Syria, A.D. 1342, author of the Takwim-ul-Baldan.
Abulgasius. See Bactria, 224.
Abuva, also Avva guda, Tel., Trichosanthes bracteata.
Acacia amara, lebbek, speciosa. See Albizzia.
Acacia cinerea, Dichrostachys cinerea.
Acacia dalca, Caillea cinerea.
Acacia lævigata, Prosopis dulcis.
Acacia scandens, Entada pursætha.
Acacia xylocarpa, Inga xylocarpa.
Acajuba occidentalis, Anacardium occidentale.
Acalephæ. See Medusæ; Portuguese Man-of-war.
Acalypha hispida, Caturus spiciflorus.
Acanthopterygii. See Fishes, 1108.
Acanthus ilicifolius, Dilivaria ilicifolia.
Acarus coffeæ. Coffee Planting, 774.
Accad. See Kalah.
Acer criticum. See Pat'har.
Achemenidæ. See Cuneiform; Zend.
Acheta. See Crickets; Insects.
Achi maram, Tam., Calasanthes Indica.
Achymus asper, Trophis aspera.
Achyranthes nodiflora, Allmania nodiflora.
Achyranthes sessilis, Alternanthera sessilis.
Achyranthes villosa, Ærua lanata.
Acmena Zeylanica, Eugenia Zeylanica.
Acontiadidæ—Reptiles.
Acridotheres pagodarum, Pagoda thrush; Sturnidæ, Thrush.
Acrochordidæ. See Reptiles.
Actias, silk-worms. See Bombycina, 411; Insects.
Actinia. See Borneo, 420.
Actitis, Sandpiper. See Scolopacidæ.
Ada, Beng., Zingiber cassumunar.
Adadode, Adasaram, Tam., Adhatoda vasica.
Adaka, Cavughu, Maleal., Areca catechu.
Adaki, Sansk., Cajanus Indicus.
Adal. See Semitic Races.
Adalat, Sharra, Arab., Law.
Adala vitala, Tel., Lepidium sativum, cress.
Adallam, Maleal., Cerbera odallam.
Adam. See Abu Kubays; Havvah.
Adamantine spar, Corundum.
Adamaruthu, Tam., Bridelia retusa.
Adambea glabra, Adamboe, Malay, Lagerstræmia roginæ.
Adam-Khor, Pers., Cannibal.
Ada modien, Maleal., Holostemma Rheedianum.
Ada morinika, Tel., Cadaba Indica.
Adas, Adz, Arab., Ervum lens.
Adas, Jav., Fœniculum vulgare.
Adas-pedas, Malay, Hyosciamus niger.
Ada syamoli, Kavanchi, Tel., Helicteres isora.
Adavi, Tel., wild, uncultivated.
Adavi amida, Jatropha curcas.
Adavi chamma, Canavalia virosa.
Adavi chedu, Trichosanthes cucumerina.
Adavi chikkudu kaya, wild var., Lablab vulgare.
Adavi godhumulu, Coix barbata.
Adavi jilakara, Purple fleabane.
Adavi kutta, Cuon rutilans.
Adavi mamena, Boerhaavea erecta.
Adavi munaga, Ormocarpum sennoides.
Adavi nabhi, Agni sikha, Gloriosa superba.
Adavi nimma, Atalantia monophylla, Limonia alata.
Adavi ponna, Rhizophora mucronata.
Addar Jasan, Parsee.
Addatinapall, Tam., Aristolochia bracteata.
Adelia. See Chœtocarpus.

Adenanthera aculeata, Prosopis spicigera.
Adenema hyssopifolia, Cicendia hyssopifolia.
Adhwari, Lagerstrœmia parviflora.
Adiantum caudatum—Hansraj.
Adi-modram, TAM., Glycyrrhiza.
Adinath, Palitana.
Adisur of Sen dynasty, i. 433.
Aditya bhakti chettu, Helianthus annuus.
Aditya dynasty, Kashmir.
Adi upa-Des. See Birbhan.
Adjunta. See Architecture.
Adjutant, Leptoptilus argala.
Adnara, HIND., Felis pardus, Panther.
Adonda, Arudonda, TEL., Capparis horrida.
Adraistæ of Arrian—Jartikka.
Adrak, HIND., Green ginger.
Adraka, i. 490.
Adulay kai, TAM., Cucumis tuberosus.
Adurian—Parsee.
Adwaita. See Charvaka; Dwaita.
Adwani Khel. See Afghanistan.
Adya katti, the Coorg knife.
Æcidium. See Fungus.
Ægoceros ægagrus, Capra ægagrus.
Ægoceros Falconeri, Capra megaceros.
Æolian pipe. See Buluh.
Æschynomene grandiflora, Agati grandiflora.
Æschynomene triflora, Desmodium triflorum.
Æsculapius. See Dhanwantari.
Æsculus hippocastanum, Horse chestnut.
Æsop's Fables. See Bidpai; Kalila-wa-Damna.
Æsta-kudus, ARAB., Lavender.
Æthopyga, Sun birds.
Æt-musana, SINGH., Cyathea arborea.
Afaz, Afis, ARAB., Galls.
Afghans, Pathan.
Afim, Afyun, ARAB., Opium.
Aflatun, ARAB., Balsamodendron bdellium.
African plants. See Botany.
Afridi. See Afghanistan.
Afsantin, ARAB., Artemisia; Wormwood.
Afshar—Iliyat.
Aftimun, HIND., Cuscuta reflexa.
Agada tantra, SANSK., Antidotes.
Agalugen, ARAB., Eagle-wood, Lign-aloes, Aquilaria agallocha.
Agamidæ—Reptiles.
Agane. See Babylonia, 218.
Agapetes arborea, Vaccinium Leschenaultii.
Agara, HIND., Achyranthes aspera.
Agar-agar, MALAY, Euchœuma spinosum, Gigartina spinosa, Plocaria candida, Sea-weeds.
Agaria. See Chutia Nagpur.
Agaric, Amadon.
Agaru, SANSK., Aquilaria agallocha, Eagle-wood, Lign-aloes.
Agarwal, Oswal.
Agasa-tamare, TAM., Pistia stratiotis.
Agasi, Agati grandiflora.
Agathis loranthifolia, Dammara orientalis.
Agathocles. See Bactria, 222.
Agathos Demon, Hindu, 71.
Agathotes chirata, Ophelia chirata.
Agave cantala, Fourcroya cantala.
Aghor. See Oriya.
Aghora. See Cannibals; Chamundi; Kerari.
Agila gahru, MALAY, Eagle-wood.
Agin buti, DUK., Ammannia vesicatoria.
Aglaia adorata. See Chloranthus inconspicuus.
Aglay maram, TAM., Chickrassia tabularis.
Agni. See Divination; Hindu; Ordeal.
Agnihotra Brahmans, i. 433.
Agni-jwala, SANSK., Grislea tomentosa.
Agni mata, TEL., Plumbago Zeylanica.
Agni vendrapaku, TEL., Ammannia vesicatoria.
Agriculture, Husbandry.
Agri-Horticultural Societies. See Botany, 422.
Agrostis linearis, Cynodon dactylon.
Aguayka, a short and very hard leather whip, about one and a half feet long, attached to a stick, used by Cossacks and the Tartars.
Agur, TAM., Hugonia mystax.
Ahairiah. See Boar.
Aharwarah, Rohilkhand.
Ahel, ARAB., Lign-aloes.
Aheta. See Philippines.
Ahilla, SINGH., Cathartocarpus fistula.
Ahir, PERS., Conessi seed.
Ahir. See Gorakhpur.
Ahlada mara, CAN., Ficus Indica.
Ahmad. See Paniput.
Ahmad, Wajah-ul-Mulk. See Chardaota.
Ahreo, SIND., Lepidium sativum.
Ahriman—Parsee.
Ahuna Vairya—Parsee.
Ai or Ananit. See Chaldæa, 642.
Aihole, i. 612.
Aika-wairena, SINGH., Ophioxylon serpentinum.
Ailan, HIND., also Elaur, Ellal, Andromeda ovalifolia.
Aima, TAM., Buchanania latifolia.
Aimak. See Char Aimak; Feroz Kohi; Iliyat; Parsivan.
Ain, MAHR., Terminalia tomentosa.
Aing? BURM., Dipterocarpus alatus.
Aini mara, Anjeli, MALEAL., Artocarpus hirsutus.
Aino, JAPAN, Jesso.
Ain-ul-dik, ARAB., Abrus precatorius.
Airāvati, the Ravi.
Air-bladder. See Fish Maws.
Aishk-pecha, PERS., Pharbitis nil.
Aiwulli. See Architecture, 145.
Ajaib-ul-Makhlukat, Zakariya-al-Kazwini.
Ajam. See El-Ajem.
Ajata Satru—Palibothra, Pataliputra.
Ajmir, Hindustan, 82; Mhairwara, i. 449.
Ajmud, HIND., Apium involucratum.
Ajuga fruticosa, Anisomeles Malabarica.
Ajunta Caves. See Cave Temples; Jain Architecture.
Ajwain, HIND., Ligusticum ajowan, Ptychotis ajwain, Bishop's weed.
Ak, HIND., Calotropis procera.
Aka Khel. See Afghanistan.
Akal nafsah, ARAB., Euphorbia Canariensis.
Akarakarum, TAM., Pellitory.
Akarkara, HIND., Spilanthes oleracea.
Akarparsi, MALAY, Asparagus racemosus.
Akar-wangi, MALAY, Andropogon muricatus.
Akasa-tamara, TEL., Pistia stratiotis.
Akas-bel, GUJ., Cuscuta reflexa.
Akash bulli, BENG., Cassyta filiformis.
Akas-mukhi. See Mendicants; Saiva.
Akas-nim, HIND., Bignonia suberosa.
Akazai. See Afghanistan.
Akhar, Rikhali, BEAS, Rhus vernicifera.
Akhi of Kulu, Rubus, *sp.*
Akhira—Palli.
Akhiri Char-shambah. See Muhammadanism.
Akhul. See Central Asia.
A-kia-lu-hiang, CHIN., Lign-aloes.
Akkada, Upper, or Northern Chaldæa. See Commerce; Cuneiform; Literature.
Akkyc. See Binua.
Aklil-ul-jabal, ARAB., Rosmarinus officinalis.
Aklil-ul-Malik, HIND., Astragalus hamatus.
Aklu, HIND., Viburnum fœtens.
Akra, Ankra, HIND., Vicia sativa.
Akri, HIND., Withania coagulans.
Ak-rokat—Kalu.
Akrot, HIND., Juglans regia, Aleurites triloba.
Aku chenrudu, TEL., Euphorbia cattimandu.
Akuje madu, TEL., Euphorbia nivulia.
Akund, HIND., Calotropis procera.
Akuyila-semun-rumi, ARAB., Opobalasam.
Ak-yau, BURM., Agallocha wood.
Ala-chandala, Alsanda, TAM., Dolichos Sinensis.
Alaika, Alli-chettu, TEL., Memecylon ramiflorum.
Alakh Nami—Sanyasi.
Ala-Kul, Lakes.
Alam, ARAB., Banners, Standard.
Ala maram, TAM., Ficus Indica.
Alamzai Khel. See Afghanistan.
Alanga, SINGH., Calonyction grandiflorum.
Alang-alang, MALAY, Imperata kolnighi.
Alareya-gass, SINGH., Kurrimia Zeylanica.
Ala-u-Din. See Ertoghral.
Alausa toli. See Fishes, 1114; Red Fish; Fish Roe.
Alawa, TEL., Pangolin.
Al-Azzah. See Al-lat.
Albuquerque, Portugal.
Alcurus. See Bulbul.
Alder, Alnus Nepalensis.
Alestria. See Fibres.
Aleurites laciferum, Rottlera laccifera.
Alexandria, Orite.
Alexandrian laurel, Calophyllum inophyllum.
Alga, Trichodesmium erythræum, Sea-weeds.
Al-Gazzali—Sufi.
Al-Ghabun, a Bedouin tribe.
Ali, TAM., Aquila fulvescens.
Alia, Elwa, HIND., Aloes.
Alich or Andkhui—Turkoman.
Alli Kimbula, SINGH., Crocodile.
Ali Illahi—Karund.
Alintah, MALAY, Leeches.
Alisa, Eti chilla, TEL., Dillivaria ilicifolia.
Alish of Kangra—Rubus.
Ali's Pot—Kashgul-i-Ali.
Aliveri, BENG., Lepidium sativum, Cress.
Aliya Santana, Polyandry.
Alisai. See Afghanistan.

Al-Kahira—Kahira.
Alkola, Aleurites triloba.
Alkushi, BENG., Mucuna prurita, Cowhage.
Alla batsalla, TAM., Basella cordifolia.
Alla-gili-gich-cha, TEL., Crotalaria verrucosa.
Allah—Ilah.
Allas tribe—Kedah.
Alligator pear—Persea gratissima.
Alli of Animallay, Antiaris innoxia.
Alli palli, KASH., Asparagus filicinus.
Allopu Kommu-vella-vanti-gadda, TEL., Andropogon nardus.
Alloy. See Brass; Pot Metal.
Allu, HIND., Himalayan nettle, Urtica, sp.
Allu, ordeal. See Divination; Ordeal.
Almanac, Panchanga.
d'Almeyda, Portugal.
Alms. Hindu, 72; Mendicants.
Aloe Americana, Fourcroya cantala.
Aloes-wood, Aquilaria agallocha.
Alphabet. See Akkad; Deva Nagari; Literature.
Alpheadæ—Shrimps.
Alpinia cardamomum, Elettaria cardamomum.
Alpinia sessilis, Kaempfera galanga.
Alsi, HIND., Flax.
Alsophila armata, Tree-fern.
Al-Taur, Saur, ARAB., Bull.
Alu Balu, PERS., Prunus cerasus.
Alu Bokhara, HIND., PERS., Prunus Bokhariensis.
Aluk, HIND., Pine resin.
Alvares. See Portugal.
Alwar, Hot springs, 113.
Alyar, HIND., Dodonæa Burmanniana.
Amada, BENG., Curcuma amada.
Amadoa Indica, Cluytia patula.
Amalguch, HIND., Prunus puddum.
Amaltas, HIND., Cassia.
Amarak, a Bedouin tribe.
Amar-bauria, HIND., GUJ., Cusuta reflexa.
Amardad-sal—Parsee.
Amarkantak—Hindustan, 77.
Amaryllis latifolia, Crinum latifolium.
Amba, also Ambalika, Pandu.
Amba curb, MAHR., Cupania canescens.
Amba Jogi, i. 612.
Ambalu, Ampalu, MALAY, Lac.
Ambarbarus, Aarghus, ARAB., Berberis aristata.
Ambari, Bombay, Crotalaria juncea, DUKH., Hibiscus cannabinus.
Ambashta, Amlika, SANSK., Oxalidaceæ.
Ambati maddu, TEL., Trianthema obcardatum.
Ambeng, BURM., Amber.
Ambi haldi, HIND., Curcuma zedoaria.
Ambla, Amla, PANJ., Emblica officinalis.
Amblycephalidæ—Reptiles.
Ambuti, Amrul, HIND., Oxalidaceæ.
Am-chur, HIND., Mango pickles.
Amdhuka, BENG., HIND., Vitis Indica.
America. See Fu-Sang; Britain.
Ame-sa-Auza, BURM., Anona squamosa.
Amghautan, ARAB., Acacia Arabica.
Amir-ul-Mominin—Imam, Khalif.
Amla-loniha, SIAM, Oxalidaceæ.
Amlanch, Kansi, CHENAB, Ribes.
Amla vetasawmu, TEL., Calamus.
Amlika, HIND., Emblica officinalis.
Amlok, HIND., Diospyros lotus.
Amlu, CHENAB, Cusuta pedicellata.
Amluj, ARAB., Phyllanthus emblica.
Amluki, BENG., Albizzia stipulata.
Amok. See Bugis; Celebes.
Amomum galanga, Alpinia galanga.
Amomum hirsutum, Costus speciosus.
Amomum repens, Elettaria cardamomum.
Amomum zerumbet, Curcuma zedoaria.
Amomum zingiber, Zingiber officinale.
Amoy. See Hae Nun.
Amphidonax, Arundo karka.
Ampulex, Wasp.
Amra, HIND., Spondias mangifera.
Amran Hill. See Babylon.
Amr Bel, HIND. See Aptimun.
Amsshashpand—Parsee.
Amu Darya. Central Asia; Oxus.
Amukanam, TAM., Physalis somnifera.
Amulet. See Divination.
Amultas; Bhawa, HIND., Cathartocarpus fistula.
Amur, a Bedouin tribe. See Bedouin.
Amus, ARAB., Ajwain seed.
Amusada nelli, SINGH., Emblica officinalis.
Amwah. See Architecture, 141.
Amyntas. See Bactria, 222.
Amyris agallocha and A. commiphora, Balsamodendron agallocha.
Amyris Gileadensis, Balsamodendron berryi, Opobalsam.
Amyris Zeylanica, Canarium commune.
An, Jan, Kal, of Beas, Urtica heterophylla.
Ana, the Supreme Being of the Chaldees; Anata, female of Ana.
Ana-deva—Homa.
Anæsthesia—Solanaceæ.
Anagundi. See Hampi.
Anai-anai, MALAY, White ants.
Anai kattaley, TAM., Agave Americana.
Anai pulia maram, TAM., Adansonia digitala.
Ana-kala-bhrita—Slave.
Anamirta cocculus. See Cocculus Indicus.
Anan, Annan-tha, BURM. ? Fagræa fragrans.
Ananda temple—Pagan.
Ananta-chaturdasi, Vishnu.
Anao, Aonouee, MALAY, Arenga saccharifera.
Anapa chikkudu kaya, TEL., Lablab vulgare.
Anaprasanam—Hindu, 66.
Anar, HIND., Punica granatum.
Anaradhapura. See Architecture, 147; Pallonarua.
Anasa maram, TAM., Ananas sativus.
Ana shorigenam, MALEAL., Girardinia Leschenaultiana.
Ana shovadi, MALEAL., TAM., Elephantopus scaber.
Anashtar, HIND., Erythrina stricta.
Anas phal, DUKH., HIND., Illicium anisatum.
Anatherum muricatum, Andropogon muricatus.
Anazah. See Bedouin.
Anchar, Antiar, JAV., Antiaris toxicaria.
Anchusa. See Dyes.
Andara-gass, SINGH., Dichrostachys cinerea.
Andersonia acuminata, Conocarpus acuminatus.
Andersonia cucullata, Amoora cucullata.
Andhra. See Coins; Warangal.
Andkhui. See Afghanistan.
Andrachne trifoliatus, Bischoffia Javanica.
Andrada—Tibet.
Andrographis paniculata, Chiretta.
Andromachus—Tareaq Faruq.
Andromeda symplocifolia, Vaccinium Leschenaultii.
Andropogon acicularis, Chrysopogon acicularis.
Andropogon saccharatus, Sorghum saccharatum.
Anethum Panmori, Fœniculum panmori.
Anethum sowa, Dill seed.
Anga. See Clothing, 748.
Angad—Nanak.
Angia, HIND., a bodice. See Clothing
Angiopteris pruinosa, Tree-fern.
Angolam, MALEAL., Alangium decapetalum.
Angrakha. See Clothing, 748.
Angria. See Conaji.
Anguza, Hing, HIND., Ferula asafœtida.
Anhenta, SINGH., Datura fastuosa.
Ani, CAN., TAM., TEL., Elephant.
Ani carra, Ooday, TAM., Odina wodier.
Anictocles Grahamiana, Tetrameles nudiflora.
Ani gandamani, TAM., Adenanthera pavonina.
Animallay — Mountains, Coimbatore, Kader.
Ani-neringi, TAM., Pedalium murex.
Anisaruli mara, CAN., Alangium decapetalum.
Anise, Anethum graveolens.
Aniseed tree, Illicium anisatum.
Anisun, Anisbu, HIND., Ptychotis.
Anjabar, HIND., Polygonum bistorta.
Anjan, HIND., Pennisatum cenchroides.
Anjan, HIND., Sulphuret of antimony.
Anjir, HIND., Ficus carica.
Anjun, MAHR., Hardwickia binata.
Anjuna, Kurpa, MAHR., Memecylon ramiflorum.
Ankhar, BEAS, Falconeria insignis.
Ank-kush, BENG., Rottlera laccifera.
Anklet. See Bracelet.
Ankron, BEAS, Rubus.
Ankulo, Ankul, MAHR., Alangium decapetalum.
Anna bugdi, TAM., Green copperas.
Anna-deo—Isani.
Annah-leng, BURM.? Fagræa fragrans.
Annam. See Cochin-China.
Anna Purna Devi—Parvati, Lakshmi.
Annesles spinosa, Euryale ferox.
Anoa depressicornis, the Sapi Utan, or Wild Cow of Celebes.
Anogeissus acuminatus, Conocarpus acuminatus.
Anomospermum excelsum, Dal, Actephila Neilgherrensis.
Anoo. See Burma, i. 526.
Ansari—Lebanon.
Anta chika, MALEAL., Anona squamosa.
Antara-tamara, TEL., Pistia stratiotes, Villarsia.
Antara valli tige, TEL., Cassyta filiformis.
Ant-eater, Manis pentadactyla, Pangolin, M. aurita.
Anterved—Jumna.
Anthemis nobilis—Chamomile.

Antheræa, genus of silk-worms. See Bombycina, 411; Insects.
Anthibidæ, a family of beetles.
Anthriscus cerefolium, Chærophyllum sativum.
Anthrodactylis spinosa, Pandanus odoratissimus.
Antialcides. See Bactria, 222.
Antiar, JAV., Strychnos tieute.
Antiaris saccidora, Lepuranda saccidora.
Antichirst. See Dajjal.
Antilope bubalus, Alcephalus bubalus.
Antilope chickara, Tetraceros quadricornis.
Antilope colus, Saiga Tartarica.
Antilope gutturosa, Procapra gutturosa.
Antilope picta, Portax pictus.
Antilope quadricornis, Tetraceros quadricornis.
Antimachus. See Bactria, 222.
Antiochus. See Bactria, 220.
Antistes—Imam.
Ants. See Formicidæ; Insects.
Antumora, BENG., Isora corylifolia.
Anu—Kha-mi.
Anu, SUMATRAN, Arenga saccharifera, Gomuti.
Anumulu, TEL., Lablab vulgare.
Anwar-i-Soheili, Panchatantra, Kashifi.
Anzarut, HIND., Sarcocolla, Pensæa mucronata.
Aola, Anola, Amla, HIND., Phyllanthus emblica.
Aornos. See Bazira; Mount Mahaban.
Apamargamu, TEL., Achyranthus aspera.
Apa marya, HIND.; Apang, BURM., Achyranthes aspera.
Apama siliquosa, Bragantia Wallichii.
Apamea, Persia.
Aphis coffeæ, Coffee louse. See Bug, i. 504; Coffee Planting, 774; Insects.
Apis. See Bull.
Apium graveolens, Celery.
Apium petroselinum, Petroselinum sativum, Parsley.
Aplotaxis auriculata, Aucklandia costus.
Apocyne vimineæ, Orthanthera viminea.
Apocynum fœtidum, Paederia fœtida.
Apocynum frutescens, Ichnocarpus frutescens.
Apollo—Krishna.
Apollodotus. See Bactria, 222.
Apollophanes. See Bactria, 222.
Aponogeton monostachys, Spathium Chinense.
Apoong, KOL., Holostemma Rheedianum.
Appa, SINGH.; Apum, TAM., Hopper.
Appak-Hodja—Kashgar.
Appel, MALEAL., Premna integrifolia.
Applacaram, TAM., TEL., Barilla.
Apple tree, Pyrus malus.
Apsaras, Swarga—Valkyne.
Apteryx Australis, Struthionidæ.
Apurs, BALUCH., Juniperus excelsa.
Aquila. See Eagle; Eagle-wood.
Araba. See Carriage.
Arabic—Languages.
Arabi mutchi, DUKH., Mullet fish.
Arachnechthra, Sun-birds.
Arachosia. See Haraquita.
Aradhya, i. 434.
Arafat—Ihram, Mount.
Arafura Sea. See Archipelago, 135.
Arainæ, Macaws of America, Parrot.
Arak, ARAB., Salvadora Persica.
Aral, Lake. See Central Asia; Lakes.
Arala, SANSK., Ailantus excelsus.
Arali, MALEAL., Allamanda cathartica.
Arali, TAM., Nerium odorum.
Aralia papyrifera, Fatsia papyrifera, Rice-paper plant.
Arandi, HIND., Castor-oil plant.
Arango, GUJ., Cornelian beads.
Arang-para, MALAY, Lamp-black.
Araq, Arq, ARAB., Alcohol, Arrack.
Ararat—Mount.
Arasa maram, TAM., Ficus religiosa.
Arashtra. Chandragupta; Jartikka.
Arasinagoorghy, CAN., Gamboge butter.
Arati. See Divination; Ordeal.
Arati pallam, TAM., Plantain.
Aravalli. See Climate; Hindus, 76; Mountains.
Aravam—Tamil.
Araya anjoly, MALEAL., Lepuranda saccidora, Antiaris innoxia.
Arbes, Arbee, ARAB., Colocasia esculenta.
Arbol de Leche, Cow tree.
Archer fish, Chætodon rostratus, and Toxotes jaculator?
Archil. See Orchilla Weed.
Archipelago. See Climate; Languages.
Architecture. See Cave Temples; Dhank; Halebid; Ellora; Ajunta; Orissa; Sculptures.
Arctomys hemachalanus, Marmot.
Ardanda, HIND., Capparis horrida.
Ardashir. See Hoormus; Kai.
Ardekan, Istakhr.
Ardibehest-Jasan—Parsee.
Ardich, TURK., Juniper berries.
Areca oleracea, Oreodoxa oleracea.
Areu, JAV., Arenga saccharifera, See Fibres; Palm Wine.
Arethusieæ—Orchiaceæ.
Argala migratoria, Leptoptilos argala.
Argali, Caprovis argali.
Argaun, Traders of Kashmir.
Argha. See Yoni; Parvati; Patera.
Arg'hiam, Hindu, 70.
Argus Pheasants, Ceriornis, *sp.* See Birds; Phasianidæ.
Argyreia speciosa, Letsomia nervosa.
Ari, Arisi payera, MALEAL., Oryza sativa.
Ari, Khubani, Chinaru, HIND., Armeniaca vulgaris.
Aria, PUSHTU, Pyrus Kamaonensis.
Aria bepon, MALEAL., Azadirachta Indica.
Ari-alu, MALEAL., Ficus religiosa.
Aria-vila, MALEAL., Polanisia.
Aridururi, TAM., Orpiment.
Ari-ikan, MALAY, Isinglass, Fish-maws.
Ari poone, S. CAN., Calophyllum elatum.
Aris, Arus, Asganda, HIND., Adhatoda vasica.
Arisina, CAN., Curcuma longa.
Aritha, HIND., Sapindus detergens, S. acuminatus.
Arius. See Fishes, 1115; Isinglass.
Ariya poriyam, MALAY, Antidesma bunias.
Arjamand Banu Begum, Taj Mahal.
Arjuna, Arjunsadra, DUKH., Pentaptera arjuna.
Arjuna—Pandu.
Arjuno, BENG., Lagerstroemia regina.
Arkalu, TEL., Harmala ruta?
Arkhar, Rikhul, BEAS, Rhus acuminata.
Arma-Bel—Kara Bela.
Armenia. See Commerce, 790; Haiq.
Arna, HIND., Bubalus arni.
Arnatto, Annatto, Bixa orellana.
Arni, HIND. of BEAS, Clerodendron siphonanthus.
Arocsha fibre of Chittagong, Callicarpa.
Arora. See Deserts, 920.
Arremene, SINGH., Cassia Sumatrana.
Arsaces—Persia, Bactria, 221, 223.
Arsenic. See Dyes; Hurtal; Realgar.
Arsenoe. See Commerce, 789.
Arsis rugosa, Grewia microcos.
Art—Jewellery.
Artabanus, Hoormuz.
Artaxerxes, Kai, Hoormuz, Persepolis.
Arthaneswari, i. 435.
Artichoke, Cynara scolymus.
Artisans. See Caste.
Aru. See Archipelago, 135.
Aru, JHELUM, PANJ., Amygdalus Persica.
Aruda, TAM., Ruta graveolens.
Aruga, Warugu, TEL., Paspalum stoloniferum.
Arugam pilu, TAM., Cynodon dactylon.
Aru kanla kachoram, TEL., Curcuma amada.
Aruli, Aungra, HIND., Emblica officinalis.
Arum campanulatum, Amorphophallus campanulatus.
Arum colocasia, Colocasia antiquorum.
Arum esculentum, Colocasia esculenta, C. antiquorum.
Arum orixense, Typhonium orixense.
Arum Rumphii, Amorphophallus campanulatus.
Arumugan—Kartikeya, Skanda.
Arunasala Puranam. See Brahma.
Arundo karka, Amphidonax karka.
Arunelli, TAM., TEL., Cicca disticha.
Arur, Rattankat, CHENAB, Andromeda ovalifolia.
Arusa-pas-pardah, PERS., Puneeria coagulans.
Arwi, HIND., Colocasia antiquorum.
Arzan, HIND., Panicum miliaceum.
Asafetida, Ferula asafœtida.
Asal-ul-nahl, Injubin, ARAB., Honey.
Asan, Saj, HIND., Terminalia tomentosa.
Asarun, ARAB., Asarum Europæum.
Asbarg, HIND., Delphinium, *sp.*, a yellow dye.
Ascaridia Indica, Vermonia anthelmintica.
Ascetics, Hylobii.
Ascidiadæ—Tunicata.
Asclepias asthmatica, Tylophora asthmatica.
Asclepias geminata, Gymnema sylvestre.
Asclepias gigantea, Calotropis gigantea.
Asclepias herbacea, Calotropis herbacea.
Asclepias microphylla, Pentatropis spiralis.
Asclepias montana and A. tingens, Gymnema tingens.
Asclepias odoratissima, Pergularia odoratissima.
Asclepias pseudosara, Hemidesmus Indicus.

Asclepias rosea, Oxystelma esculentum.
Asclepias tenacissima, Marsdenia tenacissima.
Asfar, ARAB., Carthamus tinctorius.
Asfeidaj, ARAB., White lead.
Asgand nagori, HIND., Withania coagulans.
Ash—Fraxinus xanthoxylloides.
Ashbutchegan, ARAB., Castor, Civet.
Ashkar, PERS., Caroxylon Griffithii.
Ashtoreth, Sun-worship. See Job.
Ashunkar, CAN., Jonesia asoka.
Ashur, ARAB., Calotropis gigantea.
Ashurites, Povindah.
Ashur Khana. See Allawa.
Ashwa-gandha, HIND., Withania somnifera.
Ashwertha, BENG., Urostigma religiosa.
Asi. See Armour, 161.
Asinus Indicus. See Equidæ; Onager.
Asli Tus. See Ibex Wool.
Asl-us-sus, ARAB., Glycyrrhiza.
Asnea, MAHR., Leopard.
Asoka—Jonesia asoka.
Asok maram, TAM., Guatteria.
Asphota, SANSK., Jasminum.
Aspidium arbor, Cyathea arborea.
Aspidium barometz, Tartarian lamb.
Assam—Hindustan, 82.
Assanna, Asun, MAHR., Bridelia spinosa.
Assassin. See Alamut; Hasan; Karmati.
Assothee, Ashok, TAM., Polyalthia longifolia.
Assur. See Babylonia, 218.
Assyrian dynasty. Babylonia, 218.
Astak, HIND., Dried apricots.
Astarte—Ken.
Astarte. See Baal.
Astrak, GUJ., HIND, Ammoniac gum.
Astrapia nigra, Paradise birds.
Astronomy. See Chaldæa; Kacsha.
Astrung, ARAB., Mandrake.
Astur, micronesius. See Accipitrinæ.
As-ul-us-sosun, Isra, ARAB. Orris root.
Asur. See Chutia Nagpur.
Aswa—Sacæ.
Aswail, MAHR., Ursus labiatus.
Aswalayana, TEL., Poa cynosuroides.
Aswa-medha, Horse sacrifice. See Horse, 103.
Aswaththamu, TEL., Ficus religiosa.
Ata? HIND., BENG., Anona squamosa.
Atadi, SINGH., Chiretta.
Ataka mamidi, TEL., Boerhaavia erecta.
Atanday, TAM., Capparis horrida.
Atap, MALAY, Nipa fruticans.
Atash-bahram—Parsee.
Atash khor, PERS., Caccabis chakor.
Atcha, Atti maram, TAM., Hardwickia vinata, Ebony.
Atchakzai. See Daurani.
At-demmata, SINGH., Gmelina arborea.
Ateuchus sacer, Sacred Beetle of the Egyptians. See Copridæ; Insects.
A-thau-ka-pho, BURM., Jonesia asoka.
Atherura fasciculata, Porcupine.
Ath'r—Paggi.
Atibala chettu, TEL., Sida rhomboidea.
Ati-madhramu, TEL., Glycyrrhiza, Liquorice juice.
Ati muktamu, TEL., Dalbergia Oojjainensis, Hiptage madablota.
Atis, HIND., Aconitum heterophyllum.
Atish, Tisi, Alisi, PANJ., Flax.
Ati-singia-biah, BENG., Aconitum ferox.
Atith—Siva.
Ati tipili, TAM., Scindapsus.
Ati-visha, SANSK., Aconitum ferox.
Atke'kule, BENG., Arachis hypogea.
Atmagupta, SANSK., Cowhage.
Atmisa, Artimisaya, ARAB., Artemisia.
Atnamus, ARAB., Anthemis nobilis Plant.
Atolls—Reef.
Atrek valley. See Central Asia; Etrek.
Atr-i-gul, PERS., Otto of roses.
Atta. See Ants; Insects; Poneridæ.
Attacus, a genus of silk-worms. See Bombycina, 412; Insects.
Attagen aquilus, Tachyptes aquila.
Atta-jam—Olea dioica.
Attalea funifera, Piassaba fibre.
Atta maram, TAM., Anona squamosa.
Attei, TAM., Leeches.
Attila. See Etzel.
Atti maram, TAM., Ficus glomerata.
Attoonettee, TAM., Æschynomene aspera.
Attukka-gass, SINGH., Covellia glomerata.
Attukudasa, MAL., Æschynomene aspera.
Aulantha, MALEAL., Calosanthes Indica.
Auma, HIND., Desert soil.
Aurangabad. See Daulatabad.
Aurantaceæ. See Citraceæ.
Aurea chersonesus, Ophir, Sinhoa.
Aurelia. See Phosphorescence.
Australian plants. See Botany, 423.
Authi, TAM., Bauhinia.
Authoondy kai, TAM., Capparis brevispina.
Ava Ardui Sur Jasan—Parsee.
Avadhuta or Avdhauta—Sanyasi, Saiva.
Avalokit-Eswara, a Bodhi-satwa, the Chinese Kwan Yin.
Avanak, MALEAL., TAM., Ricinus communis.
Avantipur. See Architecture, 146.
Avanzoar, Ibn Zohar.
Ava pepper. See Kava.
Avarai, TAM., Cassia absus and C. auriculata.
Ave-mavo, Ayma, TAM., Careya arborea.
Avena sativa, Oats.
Averhoes. See Abul Wahid; Avesta; Pa-zend.
Averrhoa acida, Cicca disticha.
Avisi, TEL., Agati grandiflora.
Avitta, TAM., Agati grandiflora.
Avocado—Persea gratissima.
Avoset, Recurvirostra avocetta.
Avurtunni, SANSK., Helicteres isora.
Avuru gaddi veru, TEL., Andropogon muricatus.
Awa-nori, JAP., Algæ, Sea-weeds.
Axis porcinus, Hog-deer. See Cervidæ.
Ayal-urchi, PERS., Aquilaria agallocha.
Aya maram, TAM., Ulmus integrifolia.
Ayapana, BENG., HIND., Eupatorium triplinerve.
Ayar, Eliyum, PANJ., Andromeda ovalifolia.
Ayar mawar, MALAY, Rose-water.
Ayer-Ayer, Lansium aqueum.
Aylulah—Kaylulah.
Ayodhya. See Dasaratha.
Aymgma parma, SANSK., Alstonia scholaris.
Azadirachta Indica, Weevils.
Azarbijan. See Cave, 610.
Azes. See Bactria, 223.
Azilises. See Bactria, 223.

B

BA, ACHIN, Cocos nucifera.
Ba, Ke-ba, BHOT., Goitre.
Baalbec. See Heliopolis.
Baba, a Turkish impostor, A.D. 1260.
Baba-Booden—Kadur.
Babak, an impostor, A.D. 816.
Baba Lal—Muhammadanism.
Babassa, TEL., Hydrocotyle Asiatica.
Baba Yadgar—Karund.
Babbar sher, HIND., Felis leo.
Babbasai elaka, TEL., Hydrocotyle Asiatica.
Babbeh—Kirmani.
Babblers, Birds of the sub-family Timalinæ.
Babchi, PANJ., Psoralea corylifolia.
Babeer, Papyrus antiquorum.
Babel, Tak-i-Kesra.
Baberung, Babrung, HIND., Embelia ribes.
Babhan, Brahmans, i. 433.
Babi-alu, Bencoolen, Tapirus Malayanus.
Babirussa, Horned hog.
Baboons, Papioninæ.
Babra, TEL., Dolichos Sinensis.
Babui-Tulsi, BENG., Ocimum basilicum.
Babul, HIND., Acacia, *sp.*
Babuna, HIND., Matricaria chamomilla.
Babylon. See Hillah.
Baccauria. See Dyes.
Baccharis salvia, Blumea balsamifera.
Bacchi, HIND., Vernonia anthelmintica.
Bach, HIND., Acorus calamus.
Bachang, MALAY, Mangifera fœtida.
Bach-chali kura, TEL., Basella cordifolia.
Bach-chali-manda, TEL., Ceropegia tuberosa.
Bachelors' Hall. See Deka Chang.
Bactria. See Coins.
Bactrus of the Greeks, the River Oxus.
Badak, MALAY, Rhinoceros.
Badakhshan. See Afghanistan, 30.
Badam, TAM., Canarium strictum; HIND., Terminalia catappa.
Badami, i. 612.
Badam Kohi, PERS., Apricot.
Badawurd, HIND., Fagonia cretica.
Badgers, *sp.* of family Melididæ, genera Mellivora, Taxidia.
Badhail of Aramra—Saurashtra.
Badhara, HIND., Gmelina Asiatica, PUSHTU, Taxus baccata.
Badi—Panchanga.
Badian, PERS., Fœniculum panmori.
Badian-i-Khatai, ARAB., Illicium anisatum.
Badida chettu, TEL., Erythrina Indica.
Badleyun, B'dellium.
Badlo, BEAS, Gymnosporia spinosa.
Badranjoya, HIND., Nepeta ruderalis.
Badruj-ul-abiaz, ARAB., Basella alba.
Baduchi, HIND., a red earth of Gurgaon, used as a dye.
Badul, HIND., Pteropus, Bats.
Bag, HIND., Tiger, Felis tigris.
Baga nella, HIND., Tradescantia axillaris.
Bagar, HIND., Eriophorum cannabinum.

Bag bhorenda, BENG., Jatropha curcas.
Bag-dasha, BENG., Felis viverrina.
Bagh on the Tapti. See Cave Temples, 611.
Bagh-ankra, BENG., Alangium decapetalum.
Bag-hans, Raj-hans, HIND., Phœnicopterus rosous.
Baghel, Central India—Rajputs.
Baghuna, HIND., Rhus cotinus.
Bagla. See Boat, 393.
Bag-narri, Nalu, PANJ., Arundo karka.
Bagnu of Kaghan, Populus ciliatus.
Bagon, PHIL., Balachan.
Ba-gyee-nee, BURM., Clerodendron squamatum.
Bahan, PUSHTU, SUTLEJ, TR.-IND., Populus Euphratica.
Baha-ud-Din, Nakshband, A.D. 1453.
Baha-ud-Din—Sufi.
Baha-ud-Din Zakaria, A.D. 1170—Muhammadanism.
Bahawalpur. See Daoudputra.
Bahbudi, the Afghan knife.
Bahel shulli, CAN., Asteracantha longifolia.
Bahika, Jartikka.
Bahira, HIND., Terminalia bellerica.
Bahman, HIND., Centaurea behmen.
Bahmani chil, HIND., Haliastur Indus.
Baholi or Bhawali, HIND., Land about a village homestead.
Bahraich, Ikauna.
Bahram—Varanes.
Bahram Gor. See Hun.
Bahrein, Persian Gulf.
Bahr-ul-Lut—Jordan, Dead Sea.
Bahta. See Boats, 393.
Bahu phalli, PANJ., *sp.* of Corchorus.
Bahura, HIND., Terminalia bellerica.
Baibarang, HIND., Myrsine Africana.
Bai-Bhilara. See Ayamata.
Baingan, HIND., Solanum melongena.
Bais—Rajputs.
Baiz (or sign-mark), Swad.
Baiza Bai—Sindia.
Baizai Khel. See Afghanistan.
Bajar-kit, HIND., SANSK., Manis pentadactyla, Pangolin.
Baji, HIND., Herpestes, *sp.*
Bajra, HIND., Penicillaria spicata.
Baju. See Borneo, 419.
Baka, Buko, BENG., Agati grandiflora.
Baka-kaia, MALEAL., Cucumis melo.
Bakam, ARAB., BENG., Cæsalpinia sappan.
Bakambar, HIND., Anisomeles ovata.
Bakapushpam, SANSK., Agati grandiflora.
Bakar, CIS-SUTLEJ, Cornus oblonga.
Bakayun, PERS., Melia bukayun.
Bakhoor-miriam, ARAB., Cyclamen.
Bakhtiari, Iliyat.
Bakkapu chettu, TEL., Cæsalpinia sappan.
Bakkar-ul-wash, ARAB., Alcephalus bubalis.
Bakla, HIND., Garden bean.
Baklat-ul-hakima, ARAB., Portulaca oleracea.
Baklat-ul-jesal, ARAB., Origanum normale.
Baklat-ul-malik, ARAB., Fumaria officinalis.
Baklat-ul-mubarik, ARAB., Portulaca quadrifida.
Bakr-eed. See I'd.
Baku—Caucasus.
Bakul, BENG., Mimusops elengi.
Bakur chiria—Jodagir.
Bakur-khani, PERS., Armeniaca vulgaris.
Bakus, HIND., Adhatoda vasica.
Balænidæ, Sirenia, Cetacea, Whales.
Balaji Wishwanath—Sivaji.
Balam, HIND., Cymbopogon aromaticus.
Balam-cira, HIND., Cucumis sativus.
Bala mushh, HIND., Valeriana Wallichiana.
Balanites Ægyptiaca, Ximenia Ægyptiaca.
Balanja, TRANS-INDUS, Calligonum polygonoides.
Balanopteris minor, Heritiera minor.
Balasu-kura, TEL., Canthium parviflorum.
Balchir, HIND., Nardostachys Jatamansi.
Balela, HIND., Terminalia bellerica, B. Sujah, T. citrina, also Coriaria Nepalensis.
Balghar, HIND., Russian leather.
Bali. See Archipelago, 137.
Baliyus, ARAB., Ambassador.
Balkh. See Afghanistan, 30.
Ballala—Somnathpur.
Ballarpur—Pakhall.
Balm of Gilead, Balm of Mecca, Balsamodendron Berryi.
Balnath. See Buldan; Rori Barolli.
Balogha lucida, Australian bloodwood tree.
Balpam, HIND., Steatite.
Balsamodendron Gileadense. Opobalsam.
Balsan. See Hill States.
Bal-Siva, Rori Barolli.
Bal-tar, BENG., Borassus flabelliformis.
Balti, Tibet, Deotsa.
Baltis. See Chaldæa, 642.
Baluchistan—Khelat.
Balur, HIND., Rock-crystal.
Balu rakkisa, CAN., Argemone Mexicana; TEL., Fourcroya cantala.
Balusu kura, TEL., Webera tetrandra.
Balut, HIND., Quercus, *sp.*
Ba lu wa, BURM., Abelmoschus esculentus.
Bamba—Kashmir.
Bambalimas, TAM., Citrus decumana.
Bamboo-worship, Hindu, 65.
Bamia of Bombay, Bombay Duck.
Bam-i-Danya, Pamir.
Bān, Bani, Banji, HIND., Quercus incana, Q. *sp.*
Ban, HIND., Moringa pterygosperma.
Bana, MALAY, Bore.
Banafsha, HIND., PERS., Viola odorata, V. serpens.
Banaganapilly. See Diamond; Feudatory; Hindustan, 81.
Banakhor, Ban-khor, PANJ., Pavia Indica.
Ban-akrot, HIND., Pavia Indica.
Banaphal of Sutlej, Fragaria Indica.
Banatha, SALT RANGE, Asparagus Panjabensis.
Banaula, HIND., Gossypium herbaceum.
Ba-nawa, a sect of Muhammadan fakirs.
Ban-berāl, BENG., Felis chaus.
Ban burbuti, Phaseolus rostratus.
Ban chanda, Flagellaria Indica, also Flacourtia sepiaria.
Ban-char, HIND., Quercus semecarpifolia.
Ban-chowr, Poophagus gruniens.
Banda—Nanak.
Banda Nawaz—Kulburga.
Bandar, SUTLEJ, Capparis spinosa.
Bandar Abbas, 6000 souls. See Gambroon.
Bandarū, HIND., Gardenia tetrasperma.
Bandaru, Pundaru? TEL., Hymenodyction excelsum.
Bandd'hmati—Oswal.
Bandhana, HIND. See Dyes, 1001.
Bandhūk, HIND., Pentapetes Phœnicia.
Bandhuka, HIND., Ixora bandhuca.
Bandicoot rat, Mus bandicota.
Bandi gurivenda, TEL., Adenanthera pavonina.
Band-pat, HIND., Clitorea ternatea.
Ban-drenkh, CHENAB, Acacia stipulata.
Ban gab, Diospyros cordifolia.
Ban gamak, Cucumis pubescens.
Bangari ki lakri, HIND., Vangueria spinosa.
Bangash. See Afghanistan.
Ban-gau, Vana-go, Bison.
Bang-gor of Purniah, Leptoptilos Javanica.
Ban-grah, Calamus aromaticus.
Bangshaja Brahmans, i. 435.
Ban haldi, BENG., Curcuma aromatica.
Bani Sahar, a Bedouin tribe.
Banjar, HIND., Waste land.
Banjara of the Panjab, an oculist.
Ban juen, Clerodendron inerme.
Banka, HIND., a large sword, used in athletic exhibitions.
Ban kachu, Colocasia antiquorum.
Ban kahu, Vitex negundo.
Ban-kan-bren, PUSHTU, Quercus.
Bankar, BEAS, RAVI, Premna mucronata.
Bankat, HIND., Guilandina bonduc.
Bankimu, HIND., Corylus lacera.
Bankshū, HIND., Vitex negundo.
Banksia speciosa, Costus speciosus.
Ban kuch, HIND., Viburnum cotinifolium.
Ban-kukur, JHELUM, Cornus oblonga.
Ban kuta, HIND., Cuon rutilans.
Ban luvunga, Ludwigia parviflora.
Ban-mallika, Jasminum angustifolium.
Ban mallika, Jasminum sambac.
Ban marach, Ammannia vesicatoria.
Ban marua, Æchmanthera Wallichii.
Ban marunga, Oxalis sensitiva.
Ban mehal, HIND., Pyrus baccata.
Ban mung, the dry sheath of Saccharum moonga, used for string and rope.
Banna, HIND., Viburnum fœtens.
Banner lati-gach'h, BENG., Cathartocarpus fistula.
Banniah. See Commerce, 790.
Ban-nil, BENG., Tephrosia purpurea.
Bannu, JHELUM, Callicarpa.
Ban-parra at MUNDLA, Gavæus gaurus.
Ban pat, Corchorus olitorius.
Banpatrak, CHENAB, Saxifraga ligulata.
Ban-phal, a morel, a mushroom.
Ban-potel, Trichosanthes cucumerina.
Ban raj, Bauhinia racemosa.
Ban rhea, Boehmeria utilis.
Ban-rohu, Manis pentadactyla.
Bans, B'hans, HIND., Bamboo.
Ban-shim, Lablab vulgare.
Ban-sinjli, Cratægus oxyacantha.
Bans keora, BENG., Agave vivipera.

Banslochan, HIND., Tabashir.
Ban-sunn, Crotalaria verrucosa.
Bant, HIND., Cicer arietinum.
Bantaki, HIND., Solanum melongena.
Ban-tanduli, HIND., Amarantus polygonoides.
Bantek, a wild race in Celebes.
Ban-tendu, HIND., Diospyros cordifolia.
Ban-teng, MALAY, Gavæus sondaicus.
Bantu, a race in Africa, estimated at 13,000,000.
Banur or Marcut banur, Inuus rhesus.
Ban-ustaki, HIND., Aloe Indica.
Banwa, HIND., Plotus melanogaster.
Banyan, Ficus Indica, F. nitida.
Bapanaburi, TEL., Ehretia buxifolia.
Bapanga, TEL., Psoralea corylifolia.
Ba-phalli, HIND., Corchorus triloculares.
Baphia nitida, Cam-wood, i. 561.
Bapu Drawodo, PANJ., Buckwheat.
Bar, HIND., Ficus Indica.
Bar, HIND., Quercus dilatata.
Barabar. See Cave Temples, 611.
Bara-chuls, HIND., Villarsia Indica.
Bara dari, HIND., an open pavilion or garden-house.
Bara Imam. See Imam.
Bara-kanur, HIND., Crinum Asiaticum.
Bara karela, HIND:, Momordica charantia.
Barakzai. See Daurani.
Baral, HIND., Artocarpus lacoocha.
Bara Lacha—Mountains.
Bara lasura, HIND., Cordia latifolia.
Bara makhim shim, BENG., Canavalia gladiata.
Bara maroca, HORT., MALEAL., Lablab cultratum.
Baran, CHENAB, Taraxicum officinale.
Barangi, HIND., Clerodendron infortunatum.
Bara phutika, HIND., Melastoma malabathricum.
Barari, Ber, CHENAB, Capparis spinosa.
Bara singha, HIND., Cervus Wallichii, also C. affinis and Rucervus Duvaucellii.
Bara tugar, HIND., Tabernæmontana coronaria.
Barawa, TE.-INDUS, Cynodon dactylon.
Barbadoes flower fence, Parkinsonia aculeata.
Bar-bagal, Pteropus Edwardsii.
Barbara, HIND., Felspar, used in pottery.
Barbets, *sp.* of Megalaimidæ.
Barcha, HIND., Quercus floribunda.
Barg, PERS., any leaf.
Barg-i-tambul, PERS., Betel-leaf.
Barhamdi, HIND., Microlonchus divaricata.
Barhwan, HIND. See Cow-dung.
Bari, HIND., a polishing paste used by lapidaries. Barta, a wooden bar covered with a polishing composition, used by stone-carvers.
Bari, HIND., Land near villages.
Bariara, HIND., Sida cordifolia.
Bari Doab. See Canals.
Barik-ahutri, HIND., Camel-hair cloth.
Barilla, Carbonate of soda, Kali, Kelp.
Barinka, TEL., Epicarpurus orientalis.
Bari Wafat—Muhammadanism.
Barjala, BENG., Sida cordifolia.
Barji Hatkar. See Dhangar.
Barkal, GONDI, Leopard.
Barking deer, Cervulus aureus.
Barkuk, PERS., Armeniaca vulgaris, Apricot.
Barlaam—Josaphat.
Barleria longifolia, Asteracantha longifolia.
Barley, Hordeum.
Barna, PANJ., Crataeva Roxburghii.
Baro, PANJ., Albizzia elata.
Baroch—Paitan.
Baroda—Hindustan, 81.
Bar-phuli, HIND., Euonymus fimbriata.
Barpyal, HIND., Fallow land.
Barrada—Chrysorrhœa.
Barral, HIND., Ovis ammon.
Barral, HIND., Artocarpus integrifolia.
Barranki, Bari venka, TEL., Trophis aspera.
Barrier reefs. See Atoll; Coral; Reef.
Barri gokeru, HIND., Pedalium murex.
Barrows. See Burial Customs, 518.
Barsanga, MAL., Bergera Konigii.
Barsha of Kanawar, Armeniaca vulgaris.
Bartang, HIND., Plantago major.
Bart'h, Hindu fast-days. See Cajanus bicolor; Phalah.
Barthema. See Portugal.
Bartho, HIND., Erythrina stricta.
Barthua, HIND., Hymenodyction excelsum.
Barunghi, SANSK., Gunta baringa.
Barungi, HIND., Quercus ilex.
Baryara, HIND., Sida cordifolia.
Barygaza, Paitan, Pandya.
Bărzad, HIND., Galbanum.
Basava, TEL. See Deva-dasa; Hindu, 71.
Basha, HIND., Accipiter nisus.
Bashahr. See Hill States; Kanawar.
Bashkir—Turk.
Bashr (Bishr)—Sufi.
Basil—Ocimum.
Basilisk. See Iguana.
Basma, HIND., Indigofera tinctoria.
Băsmati, HIND., Fine rice, white, long, thin grain, and fragrant when boiled.
Basna, HIND., Agati grandiflora.
Basoti of Kangra, Colebrookia oppositifolia.
Bassant of Ravi, Hypericum perforatum.
Bassar of Sutlej, Capparis spinosa.
Bassia—Isonandra.
Bassud, ARAB., Coral.
Bassu Tarta—Jamnotri.
Bastard cedar, Guazuma tomentosum.
Bastard saffron, Carthamus tinctorius.
Bastard sago palm, Caryota urens.
Bastard teak, Butea frondosa.
Bastra, HIND., Callicarpa.
Basuti, CHENAB, Adhatoda vasica.
Bat. See Cheiroptera; Mammalia.
Batagur baska—Reptiles.
Bătal—Kashmir.
Batang, SUTLEJ, Rubus.
Batangi, HIND., Pyrus variolosa.
Batar, HIND., Rice sown broadcast.
Batasha, HIND., Potash; also a sweetmeat.
Batatas edulis, Sweet potato.
Bat-bakri of Ravi, Fungus, Mushroom.
Batezai. See Afghanistan.
Bathenians, Old Man of the Mountain.
Bathu, PANJ., Chenopodium album.
Bathudi—Orissa.
Batis, HIND., Aconitum heterophyllum.
Batkar of Murree, Celtis Caucasica.
Bat-myaka, TEL., Eupodotis Edwardsii, Bustard.
Batoti, HIND., a blight or disease of pulse, in the Panjab, caused by the east wind.
Batoum, i. 609.
Batrachians—Reptiles.
Batrachus grunniens. See Fishes, 1115.
Batsali-kura, TEL., Portulaca quadrifida.
Batsnab bish, Bish, BENG., Aconitum ferox.
Battal, HIND., Euonymus fimbriata.
Battar, HIND., Grewia Rothii.
Battedombe, SINGH. ? Calyptranthes caryophyllifolia.
Battee sal, BENG., Diptorocarpus alatus.
Battya kings—Sisunaga.
Batula, HIND., Cicer arietinum.
Batu nakit, JAP., Bezoar.
Batur-nibu, HIND., Citrus decumana.
Batu-timbul, MALAY, Pumice stone.
Baubwai, BURM., Careya arborea.
Baum, Bondar, BENG., Paradoxurus.
Bauri, SUTLEJ, Capparis spinosa.
Bavar, SIND., Acacia farnesiana.
Bavungi, TEL., Celastrus paniculatus.
Ba-wa-net, BURM., Gendarussa vulgaris.
Bawang, MALAY, Onion.
Bawang-putih, Allium sativum.
Baw-chan, DUKH., Psoralea corylifolia.
Baya, JAV., Crocodile.
Bayadere, FR., Dancing girls, Devadasa.
Bayberry tree, ENG., Allspice.
Bay-heera of Himalaya, Felis pardus, Panther.
Baz, HIND., Astur palembarius.
Bazigar, HIND., an athlete, a tight-rope dancer.
Bazr-ul-Bunj., PERS., Hyosciamus niger.
Bazu, HIND., the arm; Bazuband, an armlet.
B'dellium—Balsamodendron.
Bead-seed tree, Abrus precatorius.
Beami, MALEAL., Herpestris moniera.
Bean, Faba vulgaris.
Bear-cat, Arctictis binturong.
Bear-pig, Arctonyx collaris.
Bears, *sp.* of the family Ursidæ.
Bebina, HIND., Musscenda frondosa.
Beche-de-mer, FR., Holothuria, Trepang.
Bed, PERS., Calamus, also Populus alba.
Bedana, HIND., Seedless Raisins.
Beda tigo, TEL., Ipomœa pes-caprae.
Beder race—Pindara.
Bedi—Nanak.
Bed-i-anjir, HIND., Ricinus communis.
Bed-i-majnun, PERS., Salix Babylonica.
Bed-i-mushk, Salix caprea.
Bedpai—Kashifi, Panchatantra.
Bed-ul-Ashar, EGYPT., Calotropis gigantea.
Bee-eaters, *sp.* of Merops and Nyctiornis.
Beef-wood, Casuarina equisetifolia.
Beeghotoon—Kan.
Beemboo, BENG., Coccinea Indica.
Bees. See Honey; Megachile.

Beesha, MALEAL., Beesha Rheedii.
Beetla-codi, MALEAL., Chavica betle.
Beetles. See Carabidæ; Copridæ; Insects.
Beg-banafsha, HIND., Orris root.
Beggars. See Alms; Mendicants.
Beg poora, BENG., Citron, Citrus medica.
Begram—Opian.
Begti, Cookup, Lates calcarifer.
Behar. See Bengal; Cave Temples.
Behbehan—Khogilu.
Behemoth, Hippopotamus.
Behikar, HIND., Adhatoda vasica.
Behistun. See Chronology.
Behitsil. Hot Spring, 112.
Behmen-abiad, ARAB., Centaurea behmen.
Behuari, BENG., Cordia myxa.
Behul, HIND., Grewia oppositifolia.
Bein, BURM., Opium.
Bek, CAN., TAM., Felis chaus.
Bekh, PERS., any root.
Bekhar, PANJ., Grewia Rothii.
Bekh-badian, PERS., Fœniculum vulgare.
Bekh-i-karafsh, PERS., Fœniculum vulgare.
Bekh-i-marjan, HIND., Coral.
Bekh-i-zanjabil-i-shami, PERS., Elecampane root.
Bekh-mekeh, PERS., Glycyrrhiza, Liquorice.
Bel, HIND., Ægle marmelos, Cratæva religiosa; Bela and Belphul, Jasminum sambac.
Bela, a district of Las in Baluchistan.
Bela, HIND., alluvial soil on the banks of a river.
Beladur, ARAB., Semecarpus anacardium.
Bolam Kanda Schularmani, MAL., Pardanthus Chinensis.
Bel-bandhar, a Hindu ceremony, 65.
Bel-ericu, MALEAL., Calotropis gigantea.
Beleyleh, PERS., Terminalia belerica.
Belgaum walnut, Aleurites triloba.
Beli-caraga, MALEAL., Cynodon dactylon.
Belidæus brevicaps. See Opossum; Phalangista.
Belikh-zichi, ARAB., Citrullus cucurbita.
Belilla, MALEAL., Mussœnda frondosa.
Bel kambi, CAN., Albizzia amara.
Bellamodagam, MALEAL., Scœvola belamodagam.
Bella shora, MALEAL., Lagenaria vulgaris.
Bellinger, MALEAL., Lagerstrœmia parviflora.
Belli-nundi, Nanah, MAHR., Lagerstrœmia parviflora.
Bellur. See Architecture, 146.
Bellutta areli, MALEAL., Nerium odorum.
Bellutta-champakam, MALEAL., Mesua ferrea.
Bellutta pola-tali, MALEAL., Crinum Asiaticum.
Bel Merodach. See Chaldæa, 642.
Belna, HIND., a cotton cleaning roller, a rolling pin; a screw and roller apparatus for cleaning cotton; also the sugar-cane press.
Belseren payrin tuthi, MALEAL., Abutilon Indicum.
Belostoma Indicum. See Hemiptera.
Belshazzar. See Babylon.
Beltis, wife of Bel Nimrud, called also in Chaldee Enutes or Malita. In Assyria she was called Bilta Nipruta, also Bit Ana, i. 642.
Beluga. See Cetacea; Whales.
Belulli, CAN., Allium sativum.
Beluta pola-tali, MALEAL., Crinum Asiaticum.
Bem—Kashmir.
Bem nochi, MALEAL., Vitex negundo.
Bem pavel, MALEAL., Momordica dioeca.
Bem tamara, MALEAL., Nelumbium speciosum.
Ben, BURM., Amomum cardamomum.
Bena, HIND., Andropogon muricatum.
Bena-patsja, MALEAL., Tiaridium Indicum.
Bendakai, TAM., Abelmoschus esculentus.
Bendu rapu, TEL., Rottlera tinctoria.
Bengal gram, Cicer arietinum.
Bengan, HIND., Brinjal.
Bengieri, MALEAL., Sapium Indicum.
Beni. See Oman.
Benjamin of Tudela—Karund.
Benkar, Khumb, BEAS, Hiptage madablota.
Ben-teak, ANGLO-HIND., Bentheka, MALEAL., Lagerstrœmia parviflora.
Ber, HIND., Zizyphus jujuba, Z. nummularia.
Bera, HIND., Glochidion velutinum.
Berar. See Agriculture, 129; Hyderabad.
Berbers—Semitic Races.
Ber-biang Ber-sahibah, MALAY, Brother-making.
Berchemia oppositifolia, Sageretia oppositifolia.
Bergamotte lime, Citrus bergamia.
Beri of Panjab, a large heavy boat.
Berli, MAHR., Caryota urens.
Bermi, HIND., Cratæva tapia; Trianthema obcordatum.
Bermun. See Binua.
Berosus. See Chronology, 717.
Berwaja, TRANS-INDUS, Calligonum polygonoides.
Beryl—Precious Stones.
Besan, HIND., Grain flour, Cosmetic.
Besha-nungula, BENG., Methonica superba.
Besisi. See Binua; Gunong.
Be-situn. See Cuneiform.
Besra, HIND., Accipiter virgatus.
Bet, Beta, Bettamu, BENG., HIND., Calamus, Ratan.
Bete, TERNATE, Colocasia esculenta.
Betel-nut palm, Areca catechu.
Betel vine, Chavica betle.
Beter, HIND., Juniperus squamosa.
Betikh, ARAB., Cucumis melo.
Beto sag, BENG., Chenopodium viride.
Bettu temples. See Architecture, 146.
Bet udata, TEL., Sciurus maximus.
Betula nitida, Alnus nitida.
Bet ya, BURM., Urtica heterophylla.
Beya, JAV., MALAY, SANSK., Cowrie.
Bezoar, Calculus cysticus. See How Tsao.
Bhabar, HIND., Andropogon involutum.
Bhaboot, HIND., Ashes. See Atit.
Bhadauria chiefs. See Feudatory.
Bhadra tunga gaddi, TEL., Cyperus hexastachyus.
Bhadri-nath—Tapta-kund.
Bhagela. See Chalukya.
Bhagirathi river. See Hugli.
Bhagmutty—Kathmandu, Pusputnath.
Bhains, HIND., Bubalus arni.
Bhaji, HIND., Greens, Amarantus.
Bhajji. See Hill States.
Bhakra, HIND., Tribulus, *sp.*
Bhakri, HIND., a yellow earth of Multan, used as a dye.
Bhakta—Vishnu.
Bhalawan, DUKH., Semecarpus anacardium.
Bhalu, HIND., Ursus, *sp.*
Bhalu soor, HIND., Arctonyx collaris.
Bhari, HIND., Rhus cotinus.
Bhan, Labhan, PUSHTU, Populus Euphratica.
Bhand, HIND., Geranium nodosum.
Bhang, PERS., Bhanga, Ganjika, SANSK., Hemp, Cannabis sativa.
Bhangar bij, HIND., Asphodelus fistulosus.
Bhant, BENG., Clerodendron infortunatum.
Bhar—Rohilkhand.
Bharata, Pandu.
Bhartya, Tatyar, Braziers of Panjab.
Bharya, HIND., Canis pallipes, Wolf.
Bhasnuam, SANSK., Ashes.
Bhat mil, Bher band, HIND., Argemone Mexicana.
Bhatnair. See Deserts, 919.
Bhat-Raj, HIND., Bard.
Bhatta Soma Deva, author of the Kat'ha-sarit-Sagara. He lived about A.D. 1088.
Bhatti—Hissar; Rajputs.
Bhattiah. See Commerce, 790; Deserts, 920.
Bhattya dynasty. See Bharata.
Bhatwa, Bathu, HIND., Chenopodium album.
Bhau-bij festival. See Brahman, 432.
Bhawani—Parvati.
Bhawani river. See Cauvery.
Bhayroo, URIYA, Chloroxylon Swietenia.
Bheamoka, BENG., Helianthus tuberosus.
Bhekkar, Pekkar, PANJ., Adhatoda vasica.
Bhela, BENG., Semecarpus anacardium.
Bhendi, HIND., Abelmoschus esculentus.
Bheng, HIND., Nelumbium speciosum.
Bher-bhand, HIND., Argemone Mexicana.
Bhewndy. Hot Springs, 112.
Bhey, Bhot, Fagopyrum esculentum.
Bhihar—Rohilkhand.
Bhikshuka—Sanyasi.
Bhikuk. See Brahman, 430.
Bhil—Hindustan, 83; Hyderabad, 134.
Bhila, Bhiladar, Bhilawar, HIND., Semecarpus anacardium.
Bhim—Rudra Prayag.
Bhima—Pandu.
Bhima horses. Horse, 105.
Bhimb, HIND., Coccinea Indica.
Bhimpoga. See Cloths.
Bhim-raj, Paradise fly-catcher.
Bhimtal. See Lakes.
Bhir (female) GOND., Tetraceros quadricornis.
Bhir buti, HIND., a scarlet insect.
Bhiree, MAHR., Chloroxylon Swietenia.
Bhirkura (male), GOND.; Bhirul of Bhils, Tetraceros quadricornis.
Bhogra, HIND., Cleome pentaphylla.
Bhojpatra, HIND., Betula Tartarica, B. bhojpatra.
Bhokur, HIND., Cordia latifolia.
Bhola, Trout of the Ganges.
Bhomia—Kathiawar.
Bhondar, BENG., Viverridæ.

Bhooi mung, BENG., Ground-nut.
Bhoomia-nim, HIND., Gratiola serrata.
Bhooshee, HIND., Crude carbonate of soda.
Bhopal. See Feudatory; Hindustan, 80.
Bhosa, Bhoonsa, HIM., Cuon rutilans.
Bhot race—Kashmir, Himalaya.
Bhownagar chiefs. See Feudatory
Bhoysing, GUJ., HIND., Ground-nut.
Bhuansu, NEPAL, Cuon rutilans.
Bhudurea—Joshi.
Bhugri, HIND., dried date, dried jujube.
Bhui-dagdha, HIND. See Chiwana; or Hindu Cremation Place.
Bhuinhar—Brahmans.
Bhuin-koit, Kawtha, HIND., Feronia elephantum.
Bhuiya—Orissa.
Bhuk, JHELUM, Allium sphærocephalum.
Bhu kupittham, SANSK., Feronia elephantum.
Bhuluvanga, SANSK., Jussieua repens.
Bhumij—Orissa. See Chutia Nagpur.
Bhumi jamad-alu, Okkala, Slave.
Bhumi tailum, SANSK., Naphtha.
Bhum-phor, HIND., Philipæa calotropidis.
Bhumtas, HIND., Salix tetrasperma.
Bhungi, Isband, HIND., Jute, Circhorus olitorius.
Bhu-okra, HIND., Zapania nodiflora; Bhui-kumra, Tricosanthes cordata; Bhui-champa, Kaempferia rotunda; Bhui jamba, Premna herbacea; Bhuin-kumra, Batatas paniculatus; Bhui-sunn, Crotalaria prostrata; Bhuin aunla, Phyllanthus niruri.
Bhur, HIND., Sandy hillocky soil.
Bhura of Panjab, Coarse goat-hair cloth, sackcloth.
Bhurjamu, Barjapatri, TEL., Betula bhojputra.
Bhurtpur. See Feudatory; Hindustan, 80.
Bhustrina, SANSK., Andropogon schoenanthus.
Bhut, Bhut-bali, Spirit-worship.
Bhutula bhairi, TEL., Croton lacciferum.
Bhutam kusam, SANSK., Croton lacciferum.
Bhuta-nidya, SANSK., Mental ailments.
Bhut-jata, HIND., Apium graveolens.
Bhuvaneswar or Benares—Jain.
Bhyns, HIND., Buffalo.
Bhyri, HIND., Falco peregrinus.
Bi-ar of Hazara, Pinus excelsa.
Bibla, HIND., MAHR., Pterocarpus marsupium.
Bibla of Bowri, Leopard.
Bibor—Kolita.
Bibos cavifrons, Gavæus gaurus.
Biche-da-mar, Holothuria.
Bich-tarik, BENG., Letsomia nervosa.
Bich-taruka, BENG., Argyreia speciosa.
Bichua (scorpion), HIND., Urtica heterophylla.
Bicol. See Philippines.
Biddat, ARAB., in Muhammadan law points neither enjoined nor forbidden.
Bidul, HIND., Bauhinia purpurea.
Bignonia chelonoides, Stereospermum chelonoides.
Bignonia Indica, Calosanthes Indica.
Bignonia quadrilocularis, Spathodea Roxburghii.
Bignonia undulata, Tecoma undulata.
Bihi, HIND., PERS., Cydonia vulgaris.
Bihull, Biul, SIND., PANJ., Grewia oppositifolia.
Bija. See Hill States.
Bijar, the Brahmany Bull. See Brihotsarg.
Bijara sala, SANSK., Anacardium occidentale.
Bija-sal, BENG., Pterocarpus marsupium.
Bijband, Kuwar, HIND., Polygonaceæ.
Biju, HIND., Mellivora Indica.
Bikanir. See Desert; Feudatories; Hindustan.
Bikki, Konda manga, TEL., Gardenia latifolia.
Bilaspur. See Hill States.
Bilaur, HIND., Rock-Crystal.
Bilimbi, MALEAL., Bilin, SINGH., Averrhoa bilimbi.
Bilitshi of Lahaul, Ribes, *sp.*
Bil-jhun-jhun, HIND., Crotalaria retusa.
Billa-ilei, CAN., Gerbillus Indicus.
Billi lotan, HIND., Melissa.
Billu chettu, TEL., Chloroxylon Swietenia.
Billuga, Billu karra, TEL., Swietenia chloroxylon, Chlor. Swietenia.
Billu gaddi, TEL., Saccharum spontaneum.
Bil nalita, BENG., Corchorus fascicularis.
Biloja, SUTLEJ, Falconeria insignis.
Bilva, TEL., Cratæva Roxburghii.
Bilva-titha, CAN., Feronia elephantum.
Bima. See Archipelago, 138.
Bimak, HIND., Myrsine Africana.
Bimbu, Bhimb, HIND., Coccinia Indica.
Bin, BENG., BURM., Cannabis sativa.
Bin, HIND., a stringed musical instrument; the binjoji is a pipe used by snake-charmers.
Bina, Bala, Usir, HIND., Andropogon muricatus.
Bina, Binahe, BENG., Avicennia tomentosa.
Bina, BORNEO, Antiaris toxicaria.
Bina, HIND., Musk-deer.
Bina, HIND., Avicennia tomentosa.
Bincha, HIND., Flacourtia sapida.
Binda, TEL., Hibiscus esculentus.
Bindak, HIND., Corylus avellana.
Bindal, HIND., Momordica echinata.
Bin-kuk, ARAB., Armeniaca vulgaris.
Bin-punka, HIND., Puneeria coagulans.
Binua. See Archipelago, 136.
Biophytum sensitivum—Oxalidaceæ.
Biramdandi, HIND., Microlonchus divaricata.
Birba, HIND., Terminalia bellerica.
Bird cherry, Cerasus cornuta.
BIRD INDEX. See after this General Index.
Birgujar—Rajputs.
Birgus latro. See Crustacea.
Birhor. See Chutia Nagpur.
Biri, HIND., Ærua Javanica.
Birija, HIND., Galbanum.
Birmi, DUKH., Trichosanthes incisa.
Birmi, HIND., Taxus baccata.
Birra, HIND., Picea, *sp.*
Birthwort, Aristolochia bracteata.
Birum-jasif, PERS., Artemisia.
Biruni. Abu Rihan; Al Biruni.
Bisatun. See Hungrung.
Bisaya. See Philippines.
Bisfaij, TRANS-INDUS, Adiantum capillus veneris.
Bish, Batsnab-bish, HIND., Aconitum napellus.
Bish-bans, Beesha Rheedii.
Bishmutty—Kathmandu.
Bishop's weed, Anethum sowa.
Bishtarak, Argyreia speciosa.
Biskhopra, DUKH., Trianthema decandrum.
Bismillahi—Prasada.
Bison of Madras, Gavæus gaurus.
Bistuj, ARAB., GUJ., Boswellia thurifera.
Bitaghat. See Literature.
Biti, MALEAL., Dalbergia latifolia.
Bit-miaka, CAN., TEL., Bustard.
Bit noben, HIND. See Bit-laban.
Bitter apple, wild gourd, Citrullus colocynthis.
Bittern, *sp.* of Ardetta and Botaurus.
Bium, TEL., Oryza sativa.
Biur, Kingkhak, SUTLEJ, Artemisia.
Biyawak, Bewak, MALAY, Iguana.
Biyom, LEPCHA, Pteromys, *sp.*
Biyu kantyem, BHOT., Talpa microura.
Biyu khawar, TEL., Mellivora Indica.
Blackbirds, *sp.* of Merula.
Black Hole. See Holwell.
Black Mountains—Mount Mahaban.
Black salt, Bit-laban.
Blackwellia Ceylanica, Homalium Ceylanicum.
Blackwood, Dalbergia sissoides, Rosewood.
Blatti, MALEAL., Sonneratia acida.
Bleak-fish. See Chiliva.
Blechnum, Tree-fern.
Blimbing-basi, MALAY, Averrhoa bilimbi.
Blimbing manis, MALAY, Averrhoa carambola.
Blimbingun teres, Averrhoa bilimbi.
Blistering beetle, Cantharis vesicatoria.
Blow-pipe. See Armour, 163.
Blue Mountain. See Koladyn.
Bluestone, Sulphate of copper.
Blumea grandis. See Camphor.
Blyth, Edward. See Birds, 367.
Bo, Bo-gaha, SINGH., Urostigma religiosa.
Boarda-gumudu, TEL., Benincasa cerifera.
Board of Control, instituted A.D. 1784. See British India, 448.
Boar standard. See Lanchhana; Varaha.
BOAT INDEX. See after this General Index.
Boball. See Feudatory.
Bobra, Bobarlu, TEL., Dolichos catjang.
Boda, Bondaga, HIND., Lagerstrœmia lanceolata.
Bodanta chettu, TEL., Bauhinia, *sp.*
Boda taram, TEL., Sphæranthus Indicus.
Bodda chettu, TEL., Ficus glomerata.
Boddama, TEL., Bryonia callosa.
Bodhi-drum, i. 493.
Bodhisattwa Avalokiteswara, Tsongkha-ba, Josaphat.
Bodingan Sumatran, Brinjal.
Bodo-pail-kura, TEL., Trianthema obcordatum.
Bogum wanlu, TEL., Dancing girls.
Boiggiah of S. Mahratta Country. See Boyilla.
Bois d'Aigle, FR., Agallocha wood.

Boksara-gass, SINGH., Gomphia angustifolia.
Bokada, TEL., Clerodendron infortunatum.
Bo-ke-mai-za, BURM., Kydia calycina.
Bokhara. See Central Asia; Turkestan.
Bokhari. See Abu Abdullah.
Bokhena, TEL., Zapania nodiflora.
Bokhi or Utimukta, DUKH., Hiptage madablota.
Bokkudu, TEL., Hydrocotyle Asiatica.
Bokur, MAHR., Cordia Rothii.
Bol, HIND., Balsamodendron myrrha, Myrrh.
Bola, BENG., Paritium tiliaceum.
Bolandur, CAN., Lagerstrœmia microcarpa.
Bole. See Ochre.
Boleophthalmus. See the Jumping Johnny.
Bolintra-bolum, TEL., Myrrh.
Bol siah, PERS., Aloes.
Boma-papata, TEL., Stylocoryne Webera.
Bombarimasa, TEL., Citrus decumana.
Bombax gossypium, Cochlospermum gossypium.
Bombax pentandrum, Eriodendron anfractuosum.
Bombay blackwood, Cassia Sumatrana.
Bombay Duck. See Bummalo; Fishes, 1116.
Bomma kachika, TEL., Costus speciosus.
Bomzu or Bunzu—Ra-khaing.
Bonassus. See Copridæ.
Bondar, BENG., Paradoxurus musanga. See Viverridæ.
Bondara, MAHR., Lagerstrœmia parviflora.
Bonga of Bisaya, Areca catechu.
Bongu veduru, TEL., Bamboo.
Boni Gulf. See Celebes.
Bonta-chemudu, TEL., Euphorbia antiquorum.
Bontia germinans, Avicennia tomentosa.
Bonze—Talapoin; Monastery; Monk.
Booby, Sula fiber, S. piscator.
Boohora-gass, SINGH., Dipterocarpus hispidus.
Boomerang. See Armour, 163.
Boondi. See Hindustan, 80.
Bora-chung, BHOT., Ground-fish.
Borassus gomutus, Arenga saccharifera.
Boratu, SIND., Pollen of Typha elephantina.
Borbacha, HIND., Leopard.
Bori, MALAY, Croton tiglium.
Borz, PUSHTU, Capra ægagrus.
Bos. See Bovidæ; Bubalus; Gavæus; Zebu.
Bostan afroz, HIND., Amarantus cruentus.
Botakadandi, TEL., Nauclea parviflora.
Botku, TEL., Hemigymma Macleodii.
Botryllidæ—Tunicata.
Botta benda, TEL., Abutilon Indicum.
Bottle gourd, Lagenaria vulgaris.
Bottu kuru, TEL., Cordia polygama.
Boue baya-za, Excœcaria agallocha.
Bouide princes. See Khalifah.
Bowchee of Bombay, Flacourtia sapida.
Boz, PERS., Capra ægagrus.
Bozandan, HIND., Asparagus racemosus.
Boz gand, HIND., Galls of Pistacia terebinthus.
Bra, Prau, BENG., CHENAB, Eremurus spectabilis.
Brah, Bras, Broa, Rhododendron, *sp.*
Brahmachari. See Sanyasi.
Brahmadurbha, SANSK., Ligusticum ajowan.
Brahmakund, i. 437, Brindaban.
Brahmanical caves. See Architecture, 144.
Brahmar manufacture, i. 433.
Brahmany goose, Casarca rutila.
Brahmany kite, Haliastur Indicus.
Brahmaputra—Jamuna; Rivers.
Brahmari mari, TEL., Clerodendron serratum.
Brahu maricha, SANSK., Cayenne pepper.
Bramadandu, TAM., Argemone Mexicana.
Bramble, Blackberry, Rubus.
Bramha rakshasi, TAM., Fourcroya cantala.
Bramia Indica, Herpestris monniera.
Brami, Sarcostigma brevistigma.
Brami shomluta BENG., Sarcostemma.
Brari, Breri, KASH., Ulmus campestris.
Bras, Bres, Karma bres, SUTLEJ, Buckwheat.
Bras, MALAY, Oryza sativa.
Braunai of Borneo.
Brazil gooseberry, Physalis somnifera.
Brazil wood, Cæsalpinia sappan.
Bread-fruit, Artocarpus hirsutus.
Brej-pam, HIND., Eider down, fine wool.
Bren, Bran, KASH., Ulmus erosa.
Breri, HIND., Quercus annulata.
Brcs, HIND., Fagopyrum esculentum.
Bridelia patula, Cluytia patula.
Bridge. See Jhula.
Brihatchitra, HIND. Cassia sophora.
Brinj, PERS., HIND., Husked rice.
Brinjal, Mad-apple, Solanum melongena.
BRITISH INDIA INDEX. See after this General Index.
Broach, the ancient Baragoza. See Pandiya.
Brog. See Drok.
Bromelia ananas, Ananas sativus.
Broonga malagum, Oil. See Oils.
Brosimum. See Cow Tree.
Brown hemp of Bombay, Ambari.
Brownies. See Yaksha.
Brug-pa—Tsong-kha-ba, Hung-Kiao.
Bruguera decandra, Ceriops Roxburghianus.
Brush-turkey, Talegalla lathami.
Bryonia grandis, Coccinea Indica.
Bua-ahi, Marquesas, Sandal-wood.
Bu-Ali-Sina. See Abu Ali.
Bu-ambilla gas, SINGH., Antidesma paniculata.
Bua-nan-ka, MALAY, Artocarpus integrifolius.
Buang Pass. See Borondo.
Buansa, HIM., Cuon rutilans.
Buaza, Buwaza, MALAY, Crocodile.
Bubalo, ARAB., Alcephalus bubalis?
Bubalo, SINGH., Coral.
Bubroma guazuma, Guazuma tomentosum.
Buckchi, HIND., Purple Fleabane.
Buckolee, HIND., Ixora bandhuca.
Buckthorn, Hippophae salicifolia.
Buckum, PERS., Pterocarpus Santalinus.
Buckwheat, Fagopyrum esculentum.
Buda-darmee, TEL., Careya arborea.
Budareni, TEL., Capparis divaricata.
Budda-kakara, TEL., Cardiospermum halicacabum.
Bud-da-tha-ra-na, BURM., Canna Indica.
Buddha Gaya. See Gaya.
Buddha's cocoanut, Sterculia alata.
Buddhist canon. See Kanishka.
Buddhist caves. See Architecture, 144.
Budha, Ikshwaku.
Budide gummadi, TEL., Beninceasa cerifera.
Budorcas taxicolor. See Takin.
Buffalo. See Bovidæ, 426; Bubalus arni; Gavæus gaurus.
Bug. See Coffee Planting, 772-73; Insects.
Bu-ghyee-phyoo, BURM., Clerodendron viscosum.
Bugi, People of Celebes.
Buglas. See Philippine.
Bug-trora of Bombay, Tecoma undulata.
Buhuari, HIND., Cordia myxa, C. latifolia.
Bui, KANGRA, Ophelia alata.
Bui, SINGH., Bui-mung, HIND., Arachis hypogea.
Bui choti, HIND., Anabasis multiflora; Bui kalan, Panderica pilosa.
Buinch, BENG., Flacourtia sapida.
Buinphal, HIND., Tuber ciberium.
Bujlo, Kapfi, RAVI, Oreoseris lanuginosa.
Bujoor, Batool, BENG., Corypha elata.
Bukayun, HIND., Melia sempervirens.
Bukbur, ARAB., Cathartocarpus fistula.
Bukhoor, DEKH., Cordia myxa.
Bukkur. See Rohri.
Bukoki, HIND., Serratula anthelmintica.
Bukur-Kohani, Bokhara, Apricot.
Bulbine Asiatica, Crinum Asiaticum.
Bulbul chashm, HIND., a pattern produced in weaving.
Bulgaria. See Finn.
Bulghar, PERS., a sort of leather.
Buli, HIND., Sterculia urens.
Bull of Siva, Hindu, 65; Nandi.
Bulla, DUKH., Terminalia bellerica.
Bulla. See Phylactery.
Bullar (black-seeded), BOM., Lablab vulgare.
Bullock heart, Anona reticulata.
Bully tree, Achras sapota.
Bulpam, TAM., TEL., Soap-stone.
Bulrush, Cat's-tail, ENG., Typha angustifolia.
Bultistan or Balti—Iskardo.
Bulu-gass, SINGH., Terminalia bellerica.
Bulung, JAV., Eucheuma spinosum.
Bu-mai-za, BURM., Albizzia stipulata.
Bum-Buklesir. Hot Springs, 113; Mineral Springs.
Bu-mee-gass, SINGH., Totranthera Roxburghii.
Bummalo. See Bombay Duck; Fishes, 1116.
Bun, ARAB., Coffee berry.
Bun, SUTLEJ, Amygdalus Persica.
Buna, HIND., Acacia speciosa.
Buna of Kaghan, Albizzia odoratissima.
Buna, KASH., Platanus orientalis.
Bund, HIND., a drop, a spot, a spotted cotton fabric.
Bundaru, TEL., Hymenodyction excelsum.
Bundela. See Rajputs.
Bundelkhand. See Central India; Feudatory; Hindustan, 83.

Bunga-chappa, MALAY, Blumea balsamifera.
Bunga-lawang, MAHR., Caryophyllus aromaticus.
Bunga-pala, MALAY, Mace.
Bungarus—Reptiles.
Bungo, Busir-ul-bunge, AR., Henbane seed.
Bungka Kutus. See Kutus.
Bung-mai-zah, BURM., Inga bigemina.
Bunj, ARAB., PERS., Hyosciamus niger.
Bunting. See Emberisinæ.
Bunun muurini of Ravi, Fragaria Indica.
Bunyiu Nanjio—Japan.
Buparíti, MALEAL., Thespesia populnea.
Bur, Buri, Bori, SIND., Typha elephantina.
Bur, Buzh, Kapfi, CHENAB, Oreoseris lanuginosa.
Buraga, TEL., Eriodendron anfractuosum, Salmalia Malabarica.
Burati. See Pulati.
Bur-buti, HIND., Dolichos Sinensis.
Buree, Putera, Riri, SIND., Bulrushes.
Burgoond, Vurgoond, GUJ., Cordia latifolia.
Burhel, HIND., Ovis nahura.
Buria, HIND., a mat; Buria baf, a mat-maker.
Burial ceremonies, Hindu, 68, 69.
Burj, HIND. of Pangra, Betula bhojputra.
Burja, Burija, TEL., Hymenodyction excelsum.
Bur-kal, GOND., Felis pardus, Panther.
Burma. See Architecture, 148.
Buro behuari, HIND., Cordia latifolia.
Buro-bet, BENG., Calamus fasciculatus.
Buro-koondo, BENG., Jasminum.
Buro-masoor, BENG., Lentil.
Burong devata, MALAY, Paradise birds.
Buroni chettu, TEL., Ficus rubescens.
Buro-rakto-komal, BENG., Nymphæa rubra.
Buro ritha, BENG., Sapindus emarginatus, Soap-nut.
Buro-shaluk, BENG., Nymphæa pubescens.
Buro-shial kanta, BENG., Argemone Mexicana.
Burr of Harriana, Cymbopogon laniger.
Burrel hay of Simla, Felis uncia.
Bursera serrata, Icica Indica.
Bursunga, HIND., Bergera Königii.
Burubu, MALAY, Spices.
Buruga manu, TEL., Bombax Malabaricum.
Burul, BENG., Artocarpus lacoocha.
Burumb, MAHR., Amoora Lawii.
Burundie, SANSK., Celosia albida.
Burun-jasif-i-kohi, PERS., Artemisia.
Buruq, Tunkar, ARAB., Borax.
Buru-shunti, BENG., Rottbœllia exaltata.
Burut—Kirghiz, Turkestan.
Buruta, SINGH., Chloroxylon Swietenia.
Busairu, SINGH., Premna tomentosa.
Bush quail, Perdicula, *sp.*
Bush rat, Golunda Elliotti.
Busi, TEL., Vitex arborea.
Busso, the Japanese Buddhist priest.
Buta-i-Miswak, HIND., Astragalus multiceps.
Butalli, Vendalli, TAM., Givottia rottleriformis.
Butan Koosam, SANSK., Anisomeles Malabarica.
Bu-ta-yat, BURM., Ægiceras fragrans.
Buti ka Mochka, CHENAB, Boletus igniarius.
But-kale, Batoola, BENG., Cicer arietinum.
But mogra, HIND., Jasminum sambac.
Butni sajji, HIND., Coarse soda.
Butocera rubus, Cocoanut tree beetle.
Butonica, Sylvestris alba, Barringtonia racemosa.
Butru, CHENAB, Fraxinus xanthoxyloides.
Butter of palm oils. See Oils.
Butterfly family—Insects; Papilionidæ; Ornithoptera Brookeana.
Butt'hhee—Kurao.
Button Quail, Turnix, *sp.*
Buttu Passalei Kirai, TAM., Basella cordifolia.
Buwah-luvung, BALI, Cloves.
Buwah-nona, MALAY, Anona squamosa.
Buz of Sutlej, Capra Sibirica.
Buzgar, a slave.
Buzoor butu of Bombay, Cycas circinalis.
Buzr katoona, ARAB., Plantaginaceæ.
Buzr-ul-shalat, Shubil, ARAB., Dill seed.
Buzzard, *sp.* of Buteo, Poliornis, Archibuteo, Pernis.
Byajainti, HIND., Sesbania Ægyptiaca.
Byakur, Bakur, BENG., Solanum Indicum.
Byga. See Binjwar.
By-it-zin, BURM., Antidesma paniculata.
Byntu, Chaughan stick.

C

CABBAGE, Brassica oleracea.
Cacalia sonchifolia, Emilia sonchifolia.
Cacatuinæ, Cocatoos of Australia. See Birds; Parrot.
Cachar. See Boro.
Cackay kalangu, TAM., Dioscorea alata.
Cacsha—Cahitija.
Cactus Indicus, Prickly pear.
Cadamba jasminiflora, Guettarda speciosa.
Cæsalpinia bonduc, Guilandina bonduc.
Cæstus. See Jetti.
Caillea cinerea, Dichrostachys cinerea.
Cairo—Kahira.
Caju-alat, MALAY, Strychnos ligustrina.
Calabash, ENG., Lagenaria vulgaris.
Caladium nymphæifolium, Colocasia nymphæifolia.
Calamagrostis arenaria, Psamma arenaria.
Calamagrostis karka, Arundo karka.
Calamaridæ—Reptiles.
Calandra. See Insects; Weevils.
Caldero bush, Pandanus odoratissimus.
Calf grass, Commelyna communis.
Calico printing. See Dyes, 1000.
Calidris, Sanderling. See Scolopacidæ.
Caligula, a genus of silk-worms. See Bombycina, 412; Insects.
Calinga. See Architecture.
Calla aromatica, Homalonema aromaticum.
Calla calyptrata, Colocasia esculenta.
Callichthys. Fishes; Walking Fishes.
Calliope. See Bactria, 222.
Callirhoe. Hot Springs, 111.
Callitris quadrivalvis, Citrus wood.
Calodium Cochin-Chinense, Cassyta filiformis.
Calocoe of Sumatra—Rhea.
Calosanthes Indica, Bignonia Indica.
Calotes, *sp.* See Blood-sucker; Reptiles.
Caltrops, Trapa bispinosa.
Calumbac—Lign-aloes.
Calyptranthes caryophyllifolia, Eugenia caryophyllifolia.
Camachie pillu, TAM., Lemon grass.
Cama oumpa. See Oumbha.
Camari—Jaitwa.
Cambodia temples. See Architecture, 147.
Camel's hay, Lemon grass.
Camel's thorn, Alhagi maurorum.
Camel thistle, Echinops echinatus.
Camirium cordifolium, Aleurites triloba.
Camujny tree oil. See Oils.
Camunium Sinense, Aglaia odorata.
Cana of Galilee—Kafir Kenna.
Canals of Sind. See Hyderabad, 135.
Canarac. See Architecture, 147.
Canary grass, Phalaris Canariensis.
Canavalia obtusifolia, a sand-binding plant.
Canchie pandu, TEL., Solanum nigrum.
Candarum, Amorphophallus campanulatus.
Candle-nut tree, Aleurites triloba.
Canjang kire, TAM., Basella alba.
Cannibals. See Birhor; Central Provinces.
Canouj. See Cush.
Canrew, Sottakla, TAM., Flacourtia sepiaria.
Canthium coronatum, Randia.
Canthium parviflorum, Webera tetrandra.
Cantor, Theodore. See Birds, 367.
Caouana—Reptiles.
Caoutchouc. See Castilloa; Ceara; Hevea; Siphonia elastica.
Cape gooseberry, Physalis somnifera.
Cape jasmine, Gardenia radicans.
Capparis trifoliata, Crataeva Roxburghii.
Capra. See Bovidæ, 425; Mammalia.
Capulaga, Puwar, MALAY, Elettaria cardamomum.
Capurji, HIND., Bixa orellana.
Caracella. See Orfa.
Carap or Carab butter. See Oils.
Carapa Moluccensis, Xylocarpus granatum.
Carcara bulbosa, Pachyrhizus angulatus.
Carchemish—Hittite, 89.
Cardiva Island—Karateevo Island.
Cariari, HIND., Methonica superba.
Caries. See Blight; Uredo caries.
Carmania—Kirman.
Caroxylon Griffithii, yields barilla.
Carpenter bee, Xylocopa tenuiscapa. See Insects.
Carpobalsamum. See Opobalsam.
Carpophaga Forsteni. See Cittura.
Carpuramu, TEL., Camphor.
Carura regio Cerebothri—PANDYA.

Caryophyllus aromaticus, Eugenia caryophyllata.
Caryotaxus nucifera, Torreya grandis.
Casara kaia, TEL., Cucumis tuberosus.
Cashew-nut tree, Anacardium occidentale.
Caspian. See Central Asia.
Cassava plant, Janipha manihot, Manihot aipi.
Cassia fistula, Cathartocarpus fistula.
Cassite dynasty. See Babylonia, 218.
Cassowaries. See Dromaius; Struthionidæ.
Cassuvium pomiferum, Anacardium occidentale.
Caste. See Hindu, 74.
Castiglionia lobata, Jatropha curcas.
Castilloa. See Caoutchouc.
Castoreum—Civet, Jund Badushtar.
Catabeni or Gebantæ. See Okelis; Sea-Port.
Catappa, MALAY, Terminalia catappa.
Cataulacus. See Ponerida.
Cat bear, Ailurus fulgens.
Caterpillars. See Coffee Planting, 774; Drepana; Insects.
Cathay—Khitai.
Catodon macrocephalus, Cetacea, Whales.
Cat's eye—Precious stones.
Caucasians—Iranian races.
Caucasus. See Imaus.
Cauvery. See Canals; Coleroon; Kavery; Rivers.
Cavamillea Philippensis, Diospyros mabola.
Cavass. See Kaw-was.
Cavatum-pillu, TAM., Lemon grass.
Cave temples. See Buddhist Remains.
Cawnee—Kani.
Ceanothus Asiaticus, Colubrina Asiatica.
Ceanothus paniculatus, Celastrus paniculatus.
Ceara tree. See Caoutchouc.
Cedar, Red cedar, Acrocarpus fraxinifolius.
Cedar wood, Hymenodyction excelsum.
Cedrela odorata. See Cedar.
Cedrus. See Coniferæ.
Ceiba pentandra, Eriodendron anfractuosum.
Celebes. See Archipelago, 138, 139.
Cella. See Rori Barolli.
Celosia nodiflora, Allmannia nodiflora.
Celtis Caucasica.
Cemiostoma fly. See Coffee Planting, 776.
Central India. See Hill Tracts; Hindustan, 77, 82.
Central India Horse. See Armies, 159.
Central Provinces. See Coal, 752; Hindustan, 82.
Cepa sylvestris, Eurycles Amboinensis.
Cephalanthus pilulifer, Naucles parviflora.
Ceramiaceæ—Sea-weeds.
Cerapterus. See Paussidæ.
Cerasus cornuta, Prunus padus.
Cerbera fruticosa, Calpicarpum Roxburghii.
Cerbura. See Yama.
Cercopithecus. See Macacus radiatus.
Ceriornis satyra, the Argus pheasant.
Ceroxylus laceratus. See Insects; Phasma.
Cervus Aristotelis, the Sambur.
Cervus hippelaphus, Rusa Aristotelis.
Cervus porcinus, Hog-deer.
Cesar Frederich, a merchant of Venice of the 16th century, who wrote of Tenasserim.
Cesara and Cetaca, flowers mentioned in a story about Krishna.
Cesarian era of Antioch, was established there in celebration of Cæsar's victory at Pharsalia, A.A.C. 47.
Cestracion Philippii, the Port Jackson dogfish, usually 3 to 4 feet long.
Cetacea. See Delphinidæ; Sirenia; Whales.
Cetraria Islandica, Iceland moss.
Cetus macrocephalus, Cetacea.
Ceylon moss, Plocaria candida, Sea-weeds.
Chabai, Chabe, MALAY, Capsicum.
Chabai jawa, MALAY, Chavica Roxburghii.
Chaberos, the Cauvery.
Chabina, HIND., Parched gram or maize.
Chabuk, Churi, PANJ., Hiptage madablota.
Chabutra, HIND., a raised platform.
Chachiyon of Kangra, Rhododendron arboreum.
Chachundi, HIND., Soricidæ.
Chachya, HIND., Coarse silver.
Chadr, HIND., a sheet, a dam, a scarf.
Chætodon rostratus, the Archer fish.
Chagai, Desert district of Baluchistan.
Chagal-banti, Ubrun, BENG., Dæmia extensa.
Chagharzai. See Afghanistan.
Chagul, HIND., a leather water-bottle.
Chagul khuri, BENG., Ipomœa pescapræ.
Chagul nudi, BENG., Sphæranthus hirtus.
Chagul-pati, BENG., Cynoctonum pauciflorum.
Chah, PERS., a well; Chahi, land irrigated from wells.
Chah, PERS., Six; Chah mahidar, Farm-servants hired for six months.
Chahal Dukhtar. See Opian.
Chahil or Chahira—Rajputs.
Chahl minar. See Persepolis.
Chahuman or Chauhan—Rajputs.
Chai-bin, Khyal, BURM., Semecarpus anacardium.
Chailchalira, HIND., Parmelia chamchadalis.
Chai-ma-pok, BURM., Lead.
Chaitanya. See Hindus, 62; Khurdha; Pran-pralap.
Chaitya. See Architecture, 143; Chod-ten; Dungten.
Chak, HIND., a circle or marked-off plot.
Chakma. See Chittagong.
Chakor, Caccabis chukor.
Chakotra, HIND., Citrus decumana.
Chakowar, HIND., Cassia obtusifolia.
Chakrankatam. See Hindu, 60.
Chakravarti or Chuckerbutty.
Chakra varti kura, TEL., Chenopodium album.
Chaksoo, HIND., Cassia absus.
Chakunda, HIND., Cassia tora.
Chakuri, GOND., Plotus melanogaster.
Chalai of Jhelum, Juniperus excelsa.
Cha-lan-ga-da, BURM., Pterocarpus Indicus.
Chalava mirrialu, TEL., Cubebs.
Chaldæa. See Babylonia, 218; Burial Customs, 517.
Challa, Hali dasul, CAN., Lagerstrœmia reginæ.
Challa, Pillitoga, TEL., Asparagus racemosus.
Chalo-dhona, URIYA? Erythrina Indica.
Chalonwa, BEAS, SUTLEJ, Populus ciliata.
Chalta, HIND., Dillenia speciosa.
Chalukya—Kaliani.
Chama, BHOT, Hordeum cœleste.
Chamach-buza, HIND., Platalea leucorodia.
Chama kuru, TEL., Colocasia antiquorum.
Chamandi pu, TAM., Camomile.
Chamanti, TEL., Chrysanthemum Roxburghii.
Chamar, Dhor, Leather-workers.
Chamaree, MAHR., Premna integrifolia.
Chamba Brahmans, i. 433.
Chambara, MAHR., Promna tomentosa.
Chambeli, Jati, HIND., Jasminum.
Chambra of Ravi—Artemisia.
Chameleons. See Reptiles.
Cham-gadal, HIND., Pteropus bats.
Chamissoa nodiflora, Allmannia nodiflora.
Chamkat, HIND., Desmodium tiliæfolium.
Chamois, Nemorrhœdus Goral.
Chamomile, Anthemis nobilis.
Champ, Taspu, CHENAB, Alnus nitida.
Champa, BENG., Michelia champaca.
Champa nuteya, BENG., Amarantus polygamus.
Champa of Kashmir. See Suttoo.
Chamra—Charmi, Parchment.
Chamra-irak, HIND., a kind of leather.
Chamror, HIND., Ehretia aspera.
Chamuna, HIND., Edible roots of Cyperus bulbosus.
Chamunda. See Sakta.
Chamyari, HIND., Prunus puddam.
Chanaka, TEL., Cicer arietinum.
Chanakya. See Chandragupta.
Chanay kalangu. MALEAL., Taoca pinnatifida.
Chandan, HIND., Santalum album; Lal chandan, Pterocarpus Santalinus.
Chandaree, BOMBAY, Psophocarpus tetragonolobus.
Chandel, HIND., Antiaris innoxia.
Chandel. See Rajputs.
Chandi. See Palliwal.
Chandiari? BENG., Leptoptilos Javanica.
Chandika, Sakta.
Chandna, PANJ., Tetranthera Roxburghii.
Chandnee, HIND., Calonyction Roxburghii.
Chandoo. See Opium.
Chandra, BENG., Ophioxylon serpentinum.
Chandra Drona, the Baba Booden Hills.
Chandragiri. See Bijayanagar.
Chandra-poda, TEL., Argyreia speciosa.
Chandras, HIND., Copal.
Chandravansa. See Pandu.
Chandropterygii. See Fishes.
Chanduse. See Clothing, 748.
Chang, HIND., a beer of Spiti.
Changa. See Cloths.
Chang-chau-fu, CHIN., Camphor.

Chang-kwo-tsz-shu, CHIN., Catharto-carpus fistula.
Changla, TEL., Aucklandia costus.
Changlo. See Bhutan.
Changthani, a wool.
Changu of Tibet, also Chankodi of Kamaon, Canis laniger, white wolf.
Chani, TEL., Adenanthera aculeata.
Chaniari-dhauk, BENG., Leptoptilos argala.
Chanjanwale. TR.-IND., Asparagus Panjabensis.
Channa, HIND., Cicer arietinum.
Channan of Chenab, Populus alba.
Chanoo, Rhadooni, BENG., Apium involucratum.
Chaori gao, Poephagus gruniens.
Chapa janna, TEL., Fish roe.
Chaplasha, HIND., Artocarpus chaplasha.
Chaptalia gossypina, Oreoseris lanuginosa.
Char, also Chargodar, HIND., Valeriana Wallichiana.
Chara, HIND., Fodder.
Charachi, TEL., Grewia tiliæfolia.
Charadrinæ. See Birds; Plover.
Chara kanda, TEL., Colocasia nymphæfolia.
Charan. See Parasnath.
Charandas. See Hindus, 62.
Char angli, HIND., Boucerosia edulis.
Chara pappu, TEL., Buchanania latifolia.
Charati, SANSK., Ionidium suffruticosum.
Charaz, Charas, DUKH., Bustard.
Chargh, HIND., Falco sacer.
Chari, PUSHTU, Quercus ilex.
Charkhi, Kábul silk.
Charkre of Ravi, Hornbeam.
Char-mughz, PERS., Walnut.
Charon's fee—Kadho-Akha.
Charrah, ARAB., Lagenaria vulgaris.
Charsa, HIND., a skin of land, a leather bucket.
Charvaka. See Mimansa.
Chasa, HIND., Opium, Poppy.
Chasa. See Kisan.
Chasarfo, HIND., a yellow earth of Spiti.
Chasmak, PERS., Cassia absus.
Chatera, HIND., an embosser or chaser of silver and gold work.
Chaterni, HIND., Rhamnus purpureus.
Chatin, BENG., Alstonia scholaris.
Chat-khatai, HIND., Solanum xanthocarpum.
Chatni, HIND., a condiment.
Chatra, HIND., Leucas cephalotes.
Chatr go putr—Hindus, 68.
Chatta matta, Garaga, TEL., Gardenia gummifera.
Chattri, HIND., Agaricus campestris.
Chatur-bhúja, HIND., the four-armed divinity.
Chaubé. See Brahmans, 431.
Chau-chu, Chau-ch'un, Chun-chu, CHIN., Ailantus glandulosus.
Chaughan, HIND. See Hockey.
Chauhan. See Desert; Rajputs.
Chaulai, HIND., Seed of Amarantus frumentaceus.
Chaularaya, NEP., Borax.
Chaulmoogra, HIND., PER., Gynocardia odorata.
Chaumukh. See Palitana.
Chaunch. Mineral Springs.
Chauni ajwain, HIND., Cleome pentaphylla.
Chaunro, SIND., Dolichos Sinensis.
Chauran Pal. See Kashmir; Pahal.
Chau-singha, HIND., Tetraceros quadricornis.
Chavalapuri kada, TEL., Andrographis echioides.
Chavannesia esculenta. See Caoutchouc.
Chavica betel, Piper betle.
Chavica Roxburghii, Piper longum.
Chaw, a small tribe in Arakan.
Chawal, HIND., Oryza sativa, Rice.
Chawa-manu, TEL., Amoora rohituka.
Chawat, BY., Chenopodium viride.
Chawut, MALAY, a garment, clothing from the waist.
Chaya, BENG., Ærua lanata.
Chayau-ka-yoe, BURM., Amoora rohituka.
Chaya veru, TEL., Chay root.
Cheddulu, TEL., White ants.
Cheer. See Pheasant.
Cheeta Meena. See Meena.
Chega gadda, TEL., Vangueria spinosa.
Cheironectes, the frog fish.
Cheiroptera. See Bats; Mammalia; Pteropodidæ.
Chelat pipal, BENG., Stillingia sebifera.
Chelmeri, HIND., Cicca disticha.
Chelmon rostratus. See Archer Fish; Chætodon; Fishes, 1115.
Chelonidæ. See Reptiles.
Chema, Chamakura, TEL., Colocasia antiquorum.
Chem-mara, MALEAL., Amoora rohituka.
Chena—Puna Kad.
Chend potla, Patola, TEL., Trichosanthes cucumerina.
Chengiz. See Khanbalig; Organj.
Chenki, MALAY, Cloves.
Chenna, GUJ., Cicer arietinum.
Chennee chintoo, TEL., Celastrus emarginatus.
Chepang. See Haiyu; Kusunda.
Cheppu tataku, TEL., Asarum Europæum.
Chera, HIND., Thalactrum foliolosum.
Chera of Malabar. See Pandya.
Cherambola, PORT., Cicca disticha.
Cheroli, CHENAB, Prunus Armeniaca.
Cherrapunji, Khassia.
Cherrug, HIND., Falco sacer.
Cheru. See Gorakhpur; Serpent-worship.
Cheru pinnai, TAM., Calophyllum calaba.
Chess. See Chach.
Chestnut, Pavia Indica, Castanea, *sp.*
Chetakum, TEL., Chickrassia tabularis.
Chetippa, TEL., Hymenodyction excelsum.
Che-Tung-Teng. See Boats, 400.
Ch'hatisgarh. See Central Provinces.
Ch'hoto-pan-chuli, BENG., Villarsia.
Chibhali. See Kashmir.
Chichinga, HIND., Trichosanthes anguina.
Chichli. See Feudatory.
Chichri, SUTLEJ, Plectranthus rugosus.
Chichru, HIND., Himalayan nettle.
Chichua, Sankœur, GOND., Albizzia odoratissima.
Chick-pea, Cicer arietinum.
Chicolee, BENG., Sponia orientalis.
Chiha, HIND., a haul bridge.
Chihaeo or Chihanee, HIND. See Chiwana; Hindu Cremation Place.
Chih-choh-yoh, CHIN., Pæonia rubra.
Chih-kiau, CHIN., Lac.
Chih-ku, Ki-ku-tsze, CHIN., Hovenia dulcis.
Ch'ih-shuh, CHIN., Atractylodes rubra.
Chih-tan, Tsze-tan, CHIN., Pterocarpus Santalinus.
Ch'ih-t'u, CHIN., Ochre.
Chijla, Chuj, KANGRA, Fraxinus xanthoxylloides.
Chikankari, HIND., Embroidery.
Chikara. HIND., Gazella Bennettii.
Chikati manu, TEL., Mesua Roxburghii.
Chi-kaya, MAHR., Acacia rugata.
Chiki, JHELUM, Buxus sempervirens.
Chi-kiah-hwa, CHIN., Lawsonia inermis.
Chikonadi, TEL., Cadaba Indica.
Chikri, HIND., Buxus Nepalensis.
Chil or Chir, HIND., Pinus longifolia.
Chil, HIND., Milvus govinda.
Chilah, HIND., Casearia tomentosa.
Chilaoni, HIND., Current coins.
Chil-binj, DUKH., Fruit of Strychnos potatorum.
Chil-chil, Sil, HIND., Celosia argentea.
Chilgoza, AFGHAN, Pinus, *sp.*
Chilgoza, HIND., Edible nuts of cones of Pinus Gerardiana.
Chili of Chilas, Juniperus excelsa, J. arborea.
Chilka dudugu, TEL., Polyalthia cerasoides.
Chilla ginja chettu, TEL., Strychnos potatorum.
Chilla jaidar, HIND., a silk of Bokhara.
Chilloor, Kilgatch, HIND., Cæsalpinia sepiaria.
Chilrai, HIND., Picea Webbiana, P. pindrow.
Chilu nutiya, BENG., Amarantus polygonoides.
Chi mu, CHIN., Anemarhena asphodeloides.
Chimurudu, TEL., Cadaba Indica.
China. See Aborogines; Boats; Botany; Coal; Coins; Commerce; Food; Hill Tracts; Hot Springs; Languages; Literature.
China grass, ENG., Boehmeria nivea, Rhea.
China naringi, BENG., Triphasia trifoliata.
China root, Smilax Chinensis.
Chinar, HIND., Platanus orientalis.
Chindagu, TEL., Albizzia stipulata.
Chindeo. See Jain.
Chinese Tartary. See Central Asia.
Chinghar, HIND., Paradoxurus bondar.
Ching-ju, CHIN., Manna.
Ching-pa. See Kakhyen.
Chin-hiang, CHIN., Eagle-wood.
Chinik, MALEAL., Acacia rugata.
Chinjara, HIND., Leptoptilos Javanica.
Chinna avagooda vayroo, TEL., Trichosanthes incisa.
Chinna botuku, TEL., Cordia angustifolia.
Chinna jami, TEL., Acacia cinerea.
Chinna kalabanda, TEL., Aloe literalis.
Chinna nagi, TEL., Lagerstrœmia parviflora.
Chinna ranabheri, TEL., Anisomeles Malabarica.
Chinna vara-gogu, TEL., Salvadora Persica.
Chin-p'o-lo, CHIN., Citrus bergamia.
Chintamani. See Jain.
Chinta-pundoo, TEL., Tamarind.
Chinvat nerotu, the Zoroastrian bridge for souls. See Bridge.
Chipal, HIND., Ulmus erosa.

Chipi, BHOT, Arctomys hemachalanus.
Chippa-gaddi, TEL., Andropogon schoenanthus.
Chippi, also Jhula, HIND., a beggar's scallop of the shell of the sea-cocoanut.
Chipuratige, TEL., Cocculus villosus.
Chir of Chamba, Armeniaca vulgaris, HIND., Acacia Arabica, gum; also Phasianus Wallichii.
Chiragadam, TEL., Batatas edulis.
Chiranndra, Drendu, BEAS, Adelia serrata.
Chirauli, HIND., Buchanania latifolia.
Chirayit, Agathotes cherayta, Exacum tetragonum, Ophelia angustifolia.
Chirchiri, HIND., Achyranthes aspera.
Chiri benda, TEL., Sida cordifolia.
Chiri bikki, TEL., Gardenia gummifera.
Chiri dudduga, TEL., Alphonsea lutea.
Chiri malle, TAM., Jasminum.
Chiriman, Sheriman, TEL., Anogeissus latifolius.
Chirimi, Cheremin, MALAY, Cicca disticha.
Chirindi, Jarimu, RAVI, Acer cultratum.
Chiri sanagalu, TEL., Ervum lens.
Chirit murai, MALAY, Caoutchouc.
Chirmiti, HIND., Abrus precatorius.
Chirndu, HIND., Elæodendron dichotomum.
Chirongia sapida, Buchanania latifolia.
Chironia centauroides. See Chiretta.
Chiru of Tibet, Kemas Hodgsonii.
Chiru dekku, TAM., Clerodendron serratum, Gunta baringa.
Chirugu, TEL., Caryota urens.
Chiru nuti, BENG., Amarantus polygonoides.
Chiru pala, TEL., Oxystelma esculentum.
Chirwi, HIND., Dates, split and dried.
Chit, HIND., Chintz, from Chinte drops; Chit abra, cotton print; Chit pattu, a print woollen wrapper; Chit rah-dar, a striped cotton; Chit bundri, spotted (bunda drop); Buti, sprigged; Marpech, spriggled.
Chita, HIND., Felis jubata, Leopard; Felis pardus, Panther.
Chita-bansa of Panjab, Ipomœa turpethum.
Chital, HIND., Axis maculata.
Chitikeswaram, TAM., Poinciana elata.
Chiti mirak, HIND., Heliotropum brevifolium.
Chitli benda, TEL., Pavonia odorata.
Chitpatra, HIND., Marlea begonifolia.
Chitra, HIND. of HIM., Berberis aristata.
Chitra, HIND., Plumbago Europea.
Chitra of Hazara, Staphylea emodi.
Chitrali. See Afghanistan.
Chitra-mul, HIND., Thalictrum foliolosum.
Chitta amudam, TEL., Castor-oil.
Chitta buti, HIND., Abelia triflora.
Chittagong wood, Chickrassia tabularis.
Chitta yelka, TEL., Leggada lopida.
Chittee jeti, TAM., Marsdenia tenacissima.
Chitti ankudu, TEL., Wrightia tinctoria.
Chittra mulum, TEL., Plumbago Zeylanica.
Chitur mul, DUKH., Plumbago Zeylanica.
Chiun. See Kawan.
Chivan amelpodi, MALEAL., Ophioxylon serpentinum.
Chiviki velama, Ragulu, TEL., Eleusine coracana.
Chloroxylon dupada, Vateria Indica.
Chloroxylon Swietenia, Swietenia chloroxylon.
Choaspes. See Kerkhah.
Chob-China, HIND., Smilax Chinensis.
Chob-i-pau, PERS., Fothergillia involucrata.
Chodten, TIB. See Dungten.
Choka, HIND., Rumex vesicatoria.
Choklu, Halashi, CHEN., Rhus succedanea.
Cholay, NEPAL, Capra ægagrus.
Choli. See Bodice.
Cholia. See Jonakan.
Chon, HIND., Gmelina arborea.
Chondrus crispus, Irish moss.
Chonemorpha antidysenterica, Holarrhena antidysenterica.
Chong—Kariang.
Chook, HIND., Salicornia Arabica.
Choolai, HIND., Spinacia tetrandra.
Chooneria, HIND., Anthistiria anathera.
Choora. See Deserts.
Choo-tsze, Chow-leen-ke. See China, 688.
Chopada, SUMATRAN, Artocarpus integrifolius.
Choppra, CHENAB, Adelia serrata.
Chor, HIND., Coriaria Nepalensis.
Chora, GUJ., Dolichos catjang.
Chora of Simla, Angelica archangelica.
Chora-kanta, HIND., Chrysopogon acicularis.
Chor Ganga. See Churang.
Chosroes. See Khusru; Nowsherwan.
Chota buta, HIND., Abelia triflora.
Chota chand, HIND., Ophioxylon serpentinum.
Chota dhaon, HIND., Grislea tomentosa.
Chota-kanwar, DUKH., Aloe litoralis.
Choto, BENG., Leucas aspera.
C'hoto-doodhi-luta, BENG., Gymnema sylvestre.
Choto jam, BENG., Eugenia caryophyllifolia.
Choto sundhi, BENG., Nymphæa edulis.
Chough, Fregilus, *sp.*, and Pyrrhocorax, *sp.*
Chouk maram, TAM., Casuarina equisetifolia.
Choulam. See Hindu, 66.
Choung-tha, a tribe on the Koladyn.
Chowli, Choli, DUKH., Portulaca quadrifida.
Chowlu, DUKH., Dolichos Sinensis.
Chowra, CAN.? Erinocarpus Nimmonii.
Chowree or Kuree, Ceriops Candolleana.
Chow-singha, HIND., Tetraceros quadricornis.
Christians. See Cochin; Philippines, 200; Roman Catholic.
Christians of St. John—Sabæan.
Chrysoberyl. See Precious Stones.
Chrysorrhœa, River of Damascus. See Barrada.
Chu, TIB., Water; Scythian, ku; Assyrian, hu; Greek, eu.
Ch'u, CHIN., Ash tree.
Chudar. See Iliyat.
Chude. See Finn.
Chuen-choh, CHIN, Pæonia rubra.
Ch'uen-kung, CHIN., Levisticum, *sp.*
Ch'uen-tsiau, CHIN., Xanthoxylon alatum.
Chuen wu-tu, W'u-t'u, CHIN., Aconitum Sinense.
Chu-fen, Hung-tan, CHIN., Minium.
Chuguni. See Kafir.
Chuh, CHIN., Bamboo.
Chuha mar, HIND., Buteo canescens.
Chuhara, HIND., Phœnix dactylifera.
Chuhat, HIND., *sp.* of owls, owlets.
Chuh-yeh-ts'ai, CHIN., Commelyna polygama.
Chui, PUSHTU, Pyrus communis.
Chu-ka-teng. See Boat, 400.
Chukha, Khatta-mitha, HIND., Oxalidaceæ.
Chu-kin, Fuh-sang, CHIN., Hibiscus rosa Sinensis.
Chuko, HIND., Rumex acetosa.
Chukri, HIND., Rheum palmatum.
Chukul mara, CAN., Acacia elata.
Chulai, HIND., Amarantus polygamus.
Chu-lan, CHIN., Chloranthus inconspicuus.
Chulchilhera, Borrera ashneh, Dyes.
Chulla charz, HIND., Sypheotidis auritus.
Chulu, HIM., Prunus Armeniaca.
Chu-ma, Chu, CHIN., China grass, Rhea.
Chumati pati, HIND., Papyrus dehiscens.
Chumiari, Amulguch, Cerasus pudum.
Chumli sag, BENG., Amarantus polygamus.
Chunam, Chuna, HIND., Quicklime.
Chunar, HIND., PERS., Platanus orientalis.
Chunday-kai, TAM., Solanum pubescens.
Chundul, HIND., Lepuranda saccidora.
Chungi, Char-ungli, HIND., Boucerosia aucheri.
Chung-pch-lah, CHIN., Wax insect.
Ch'ungwei, CHIN., Leonurus Sinensis.
Chunni maram, TAM., Acalypha betulina.
Ch'un-shu, Chu-pi, CHIN., Cedrela odorata.
Chunu, BEAS, Syringa.
Chuppati ki baji, DUKH., Marsilea quadrifolia.
Chupri alu, BENG., HIND., Dioscorea globosa.
Chura. See Tirah.
Churangada—Pandu.
Churi-ki-bhaji, DUKH., Amarantus campestris.
Churi saroch, SALT RANGE, Asparagus Panjabensis.
Chusam, BHOT, Lutra leptonyx.
Chu-sha, Shin-sha, CHIN., Cinnabar.
Chushal. Hot Springs, 111, 112.
Chu-tan, CHIN., Polyporus.
Chuti, SUTLEJ, Asparagus Panjabensis.
Chutia Nagpur. See Jashpur; Oraon.
Chutra, BENG., Plumbago Zeylanica.
Chu-ya-tsau-kiah, CHIN., Gleditschia Sinensis.
Chu-yu, Hwa-yu, CHIN., Lard.
Cicca disticha, Phyllanthus distichus.
Cicendia hyssopifolia, Adenema hyssopifolia.
Cicendia hyssopifolia. See Chiretta.
Ciconia alba—Storks.

Ciconia calva, Leptoptilos Javanica.
Ciconia nudifrons, Leptoptilos argala.
Cinchona excelsa, Hymenodyction excelsum.
Cincinnurus regius, Paradise birds.
Cinnabar. See Vermilion.
Cinnyridæ, Honey-suckers. See Birds.
Circaetus gallicus, Serpent eagle.
Circassia, Tcherkas. See i. 609.
Circumambulation. See Tawwaf.
Cissus quadrangularis, Vitis quadrangularis.
Citron, Citrus medica.
Citrus bergamia, Lime.
Citrus Japonica, Kum-Quat.
Citrus limonum, Lemon.
Civet cats, Viverrinæ.
Clavellinidæ. See Tunicata.
Clearing nut tree, Strychnos potatorum.
Clethropsis nitida, Alnus nitida.
Cleveland's Settlement, Paharia.
Clove pepper, Pimenta officinalis.
Clove tree, Caryophyllus aromaticus.
Club-moss. See Lycopodiaceæ.
Clupea. See Hilsha; Sable Fish.
Clupeonia perforata. See Fishes, 1115.
Cluytia spinosa, Bridelia spinosa.
Cocculus Burmanni, Cyclea Burmanni.
Cocculus cordifolius, Timospora cordifolia.
Cocculus Indicus, Anamirta cocculus.
Cocculus palmatus, Columba root.
Coccus ilicis. See Kermes.
Cochin. See Feudatory; Hindustan, 81.
Cockroach, Blatta orientalis.
Cock sacrifice. See Borneo.
Cockscomb, Celosia argentea.
Cockup, Lates calcarifer.
Codaga pala, MALEAL., Conessi bark.
Coffee leaf disease, Hemileia vastatrix.
Colair Lake. See Lakes.
Colbertia Coromandeliana, Dillenia pentagyna.
Colchan. See Rajputs.
Colerun. See Cauvery; Trichinopoly.
Coleus spicatus, Anisochilus carnosum.
Collegal. See Coimbatore.
Colocasia esculenta, Caladium esculentum.
Colocynth, Citrullus colocynthus.
Colubridæ. See Reptiles.
Colymbea excelsa, Araucaria excelsa.
Colza oil. See Brassica campestris; B. napus.
Comatti kire, TAM., Celosia nodiflora.
Combretum purpureum, Poivrea coccinea.
Commiphora Madagascarensis, Balsamodendron agallocha.
Comoro Islands. See Johanna.
Conchodytes. See Crustacea.
Conessi bark tree, Wrightia antidysenterica.
Conocarpus acuminatus, Anogeissus acuminatus.
Convolvulus batatas, Batatas edulis.
Convolvulus grandiflorus, Calonyction grandiflorum.
Convolvulus nil, Pharbitis nil.
Convolvulus speciosus, Argyreia speciosa.
Convolvulus turpethum, Ipomœa turpethum.
Conyza cinerea, Vernonia cinerea.
Conyza odorata, Blumea balsamifera.
Coongilium, TAM., Rosin.
Coot, Porphyrio poliocephalus, Fulica atra.
Copalm balsam, Liquidambar styraciflua.
Copal tree, Vateria Indica.
Coppersmith, Megalaima Indica.
Coral. See Zoophyte.
Coral tree, Erythrina stricta.
Corallinaceæ, Sea-weeds.
Corchorus olitorius, Jute.
Cormorants, *sp.* of Graculus.
Cornus sanguinea, Cordia myxa.
Corvus advena, a rare white and black crow of Celebes.
Corvus corax, Raven.
Corvus monedula, Jackdaw.
Corypha umbraculifera, Talipot.
Cossyphus Aucklandia, Pachak.
Costus Arabica, Pachak.
Costus zerumbet, Alpinia nutans.
Cottamalli, TAM., Coriander seed.
Cotton tree, Eriodendron anfractuosum.
Cotum barru, SINGH., Coriander seed.
Coucals, *sp.* of Centropus.
Couch grass, ENG., Triticum repens.
Coulam. See Covelong.
Country gooseberry, Physalis angulata.
Country raspberry, Rubus.
Country walnut, ENG., Aleurites triloba.
Covilham and Alfonso de Payva, Portugal.
Cow-dung—Karshagni.
Cow-sacrifice, Gao-medha.
Cow-tree, Kiriaghuna, Gymnema sylvestre.
Crab. See Cancer; Crustacea.
Crab mungoos, Urva cancrivora.
Crane. See Ardea.
Cranganore or Kodungalur.
Crassocephalum sonchifolia, Emilia sonchifolia.
Crataeva marmelos, Ægle marmelos.
Crataeva vallanga, Feronia elephantum.
Crawfish, Palinurus. See Shrimp.
Creed. See Kalamah; Shraddha.
Creepers, little birds of the subfamily Certhiinæ.
Crematogaster—Ponerida.
Cricket—Acheta. See Insects.
Cricula. See Bombyx, 411.
Crinum nervosum, Eurycles Amboinensis.
Crocodile. See Reptiles.
Crocus. See Dyes.
Cromlech. See Burial Customs, 518.
Crops of Hindustan, 78.
Crossoptilon. See Phasianidæ.
Crotalidæ. See Reptiles.
Croton lacciferum, Rottlera laccifera.
Croton Lawianus, Trigonostemon Lawianus.
Croton sebiferum, Stillingia sebifera.
Crozier molluscs, *sp.* of Spirula.
Crusaders. See Jericho; Old Man.
Csoma de Koros, Kah-gyur, Tibet.
Ctesiphon. See Babylonia.
Cuchoo, HIND., Colocasia, *sp.*
Cuchunar, HIND., Bauhinia, *sp.*
Cuckows, *sp.* of the sub-family Cuculinæ. See Birds.
Cucumber tree, Averrhoa bilimbi.
Cucumis acutangulus, Luffa fœtida.
Cucumis citrullus, Citrullus cucurbita.
Cucumis colocynthis, Citrullus colocynthis.
Cucumis sativus, Cucumber.
Cucurbita cerifera, Beninkasa cerifera.
Cucurbita citrullus, Citrullus cucurbita.
Cucurbita lagenaria, Lagenaria vulgaris.
Cumbi, TAM., Gardenia lucida.
Cumbli. See Clothing, 748.
Cumbu, TAM., Penicillaria spicata.
Cummi, TAM., Gmelina arborea.
Cuneiform. See Akkad; Literature.
Cupania canescens, Hemigyrosa canescens.
Cupea cymosa, Canthium didymum.
Cupela, HIND., Rottlera tinctoria.
Cupressus Japonica, Cryptomeria Japonica.
Cupressus thyoides. See Cedar.
Curaya, HIND., Wrightia antidysenterica.
Curb. See Dravidian.
Curcas purgans, Jatropha curcas.
Curculigo superba, Gloriosa superba.
Curculionidæ. See Beetles; Insects.
Curcuma rotunda, Kaempfera pandurata.
Curkapulli maram, TAM., Inga dulcis.
Curlew, Ibidorhynchus Struthersii. See Birds; Numenius arquata.
Curroopillay, TAM., Putranjiva Roxburghii.
Curruca Jerdonii. See Philomela.
Curry leaf tree, Bergera Konigii.
Curuminga, SINGH., Butocera rubus.
Curu veru, TAM., Anatherum muricatum, Cuscus root.
Curwiya, ARAB., Carum carui.
Cuscus, Andropogon muricatus.
Custard apple, Anona squamosa.
Cutch Gandava, level district of Baluchistan.
Cutcha-catta maram, TAM., Lagerstrœmia parviflora.
Cutchu, HIND., Caladium esculentum.
Cuthah varekai, Cyamopsis psoraloides.
Cutta cambu, TAM., Gambier.
Cuvalam, MAL., Ægle marmelos.
Cyanea. See Phosphorescence.
Cybele or Vesta—Parvati.
Cybium. See Fishes, 1118.
Cycle. See Chronology, 717; Hwakea-tsze.
Cyclopean. See Ghorbasta; Mekran.
Cydonia vulgaris, Quince.
Cylas sturcipennis, Weevils. See Insects.
Cylicodaphne sebifera, Tetrameles nudiflora.
Cymbopogon schoenanthus, Andropogon schoenanthus.
Cymothoe. See Crustacea.
Cynanchum extensum, Dœmia extensa.
Cynanchum ipecacuanha, Tylophora asthmatica.
Cynanchum odoratissimum, Pergularia odoratissima.
Cynanchum pauciflorum, Cynoctonum pauciflorum.
Cynnyridæ. See Honey-sucker.
Cynopithecus nigrescens, the baboon of Celebes.
Cynopterus marginatus, Pteropodidæ.
Cynosurus coracanus, Eleusine coracana.
Cyperus Syriacus, Papyrus antiquorum.
Cypræa. See Cowries; Mollusca.
Cyprinus auratus. See Gold Fish.
Cypripedeæ. See Orchiaceæ.
Cypselus Batassiensis, Palm swift.

Cyrus. See Babylonia; Ctesias; Ctesiphon.
Cytisus cajan, Cajanus Indicus.

D

Daan, Hind., Punica granatum.
Daanga, Singh., Spathodea longiflora.
Daa woo gass, Singh., Conocarpus e latifolia.
Dab, Hind., Poa cynosuroides.
Dab, Beng., Xyris Indica; Hind., Viburnum nervosum; Panj., Typha angustifolia.
Daba chettu, Tel., Citrus medica.
Dabar of Nepal, Sypheotidis Bengalensis.
Dabi of Yemen, Antilope Arabica.
Dabishlim. See Bidpai; Panchatantra.
Daboia Russellii. See Reptiles.
D'Abreu. See Portugal.
Dabya. See Deserts, 920.
Dacca. See Cotton Manufactures.
Dactylopterus, Flying gurnard.
Dad, Smriti, Hind., Law.
Dada-hirilla, Singh., Ulmus integrifolia.
Dadda, Hind. of Salt Range, Acacia eburnea.
Dadde-weddeo, Singh., Golunda Elliotti.
Dadhuri, Hind., Ficus glomerata.
Dadima, Tel., Pomegranate.
Dad-maree, Beng., Ammannia vesicatoria, also A. auriculata.
Dad murdan, Hind., Cassia alata.
Dadru, Hind. of Hazara, Rhamnus virgatus, R. Persica.
Daduga, Tel., Nauclea cordifolia.
Daduri, Hind., Ficus oppositifolia, also F. Roxburghii.
Daghun of Ladakh, Cucurbita maxima.
Daghauri, Hind., Cæsalpinia sappan.
Dāghestān, i. 609.
Dah, a Burmese short sword.
Dahai, Panj., Grislea tomentosa.
Dahak, Egypt., Colocynth.
Daheu, Panj., Artocarpus integrifolius.
Dahgopa. See Cave Temples, 610.
Dahina or Dakshana, Hind., the left.
Dahir. See Kasim.
Daholia, Hind., Ficus caricoides.
Dahu, Hind., Artocarpus integrifolia.
Dahya, Hind., Trophis aspera.
Daim. See Jhow.
Dajjal, Arab., Antichrist.
Dajkar, Hind., Flacourtia sepiaria.
Dajla, the River Tigris.
Dak, Dagh, Jhelum, Ribes, *sp.*
Dakachru, Hind., Saxifraga ligulata.
Dak'h, Hind., Butea frondosa.
Dak'hangu, Hind., Delphinium cœruleum.
Dakshina-Bhakta, Sansk., Right-hand castes.
Dakshina ganga, the Cauvery.
Dakshin Raya. See Kalubaya.
Dakuri of Beas, Hedera helix.
Dal, the Kashmir lake.
Dal, Hind., Panicum stagninum.
Dala, Hind.? Valeriana Wallichiana.
Dalai Lama. See Tsong-kha-ba.
Dalbergia Mooniana, Pericopsis Mooniana.
Dalbergia Oojainensis, Ougeinia dalbergioides.
Dalchini, Taj kalmi, Hind., Cinnamomum albiflorum.
Dali doob, Beng., Xyris Indica.
Dalim, Darim, Beng., Punica granatum; Dalima, Malay, Carbuncle.
Dal-Khushka. See Dinner.
Dalla, Hind., Carbonate of soda.
Dal-mara, Can., Chickrassia tabularis.
Dalme-kattea, Singh., Eumeta Cramerii. See Insects.
Dalosingha, a Ganjam tree.
Daltonganj. See Coal, 752.
Dal-urur, Beng., Cajanus Indicus.
Dam. See Coins, 780.
Dama, Hind., Caragana pygmæa, C. versicolor.
Dama, also Damahan, Hind., Fagonia cretica.
Damalis risia, Portax pictus, Nilgai.
Daman, Hind. of Kahan, Grewia oppositifolia.
Damanaka. See Panchatantra.
Damana suraparna, Sansk., Artemisia.
Daman-i-Koh, Pers., Skirts of hills.
Damar, Malay, Rosin.
Damascenus. See Barlaam.
Damasonium Indicum, Hydrocharis cellulosa.
Dammara loranthifolia, Agathis loranthifolia.
Dammara nigra, Canarium nigrum.
Dammer trees, Canarium strictum, Vateria Indica.
Damodar. See Hugli.
Damoh. See Central Provinces.
Damon and Pythias. See Anaxagoras.
Dampa, Tel., Dioscorea aculeata.
Dampa bachali, Tel., Spinacia tetrandra.
Dampara, Tel., Odina wodier.
Dampa rashtrakam, Globba orixensis, and other Scitamineous plants; Dampa rasna, Ophioxylon serpentinum.
Damra shama, Beng., Oplismenus frumentaceus.
Damtura of Tr.-Indus, Hyosciamus niger.
Damuda, Hot Spring, 113; Sirguja.
Damuda. See Coal, 752.
Dam-ul-akhwain, Arab., Dragon's blood, Calamus draco; Pterocarpus draco, Arab., Kino.
Dan, Burm., Lawsonia inermis.
Dana, Hind., Anabasis multiflora, also Suæda fruticosa.
Danadhol, Hind., Polynisia viscosa.
Danau, Tasek, Malay, Lakes.
Dancing girls, Deva-dasa.
Dancora, Beng., Sapindus danura.
Dand alam, Burm.? Hyperanthera moringa.
Danda-let, Burm., Impatiens, *sp.*
Dandam. See Hindu, 70.
Dandan dana, Hind., Seeds of Ricinus communis.
Dandan-i-fel, Pers., Elephant ivory.
Dandhu Punt, Nana Rao. See Cawnpur.
Dandi. See Siva.
Dand khani, Hind., a white wheat.
Dandura, Chenab, Hyosciamus niger.
Danga. See Boat, 393.
Dangri of Gujerat, Cajanus Indicus.
Dan kotti, Jav., Phyllanthus niruri.
Dan-ky-wai, Burm., Cassia tora.
Dan-mo of Tibet, Capra Sibirica.
Danri, Hind. of Gujerat, Cajanus flavus.
Dan-sol-ga, Malay, Abrus precatorius.
Dant, Hind., Baliospermum Indicum.
Danti, Hind., Artemisia elegans.
Danti chettu, Tel., Celastrus montana.
Dant-ki-bhaji, Dukh., Amarantus oleraceus.
Dant sago or Sago nar? Sanseviera Zeylanica.
Dantu pesalu, Tel., Dolichos catjang.
Danusha. See Dhanuk.
Daolatzai. See Afghanistan.
Daora, also Daoura, Mahr., Conocarpus latifolia.
Daoun-shaitan, Timor? Urtica crenulata.
Dapoo, Beng., Polypodium proliforum.
Da-rakdar, a hereditary public officer.
Darakh, Guj., Raisins, Grapes.
Darali of Sutlej, Beas, Cedrela toona, *var.* serrata.
Daramu, Tel., Nar tash, Cordage.
Daran, Hind., Fagopyrum emarginatum.
Dara Nuri. See Kafir.
Daraun, Hind., Buckwheat, Fagopyrum polygonum.
Darbha, Hind., Eragrostis cynosuroides.
Darboji, Tel., Cucurbita citrullus.
Darchikna, Hind., Corrosive sublimate.
Darchil, Hind. of Chamba, Pinus excelsa.
Dar-chini, Hind., Cinnamomum iners, Laurus cinnamomus.
Dar-chob, Dar-hald, Hind., Berberis aristata; Dar-mothi, Cajanus bicolor.
Dard—Kashmir.
Dardar, Hind., Cinnabar.
Dardu. See Arniya.
Darengri, a leaf used in Kashmir for dyeing.
Dar-filfil, Arab., Chavica Roxburghii.
Darga, Hind., Juglans regia.
Dari gummadi, Tel., Pueraria tuberosa.
Darim pushpu, Hind., Punica granatum.
Darius. See Babylonia; Persepolis; Suevi.
Darkuti. See Hill States.
Daroo, Panj., Quercus incana.
Darsini, Arab., Cinnamomum Zoylanicum.
Darsook mara, Can., Grewia oblique.
Dartu, Pushtu, Amarantus anardana.
Daru, Hind., Arrack.
Daru, also Daruni, Hind., Punica granatum.
Daruk of Salt Range, Gymaion vestitum.
Darvesh. See Dervis; Eesawiyah; Faqir; Owais-bin-Aamir; Sufi.
Darwas. See Afghanistan, 30.
Darya-ka-kaf, Hind., Cuttle-fish bone.
Darya-ka-kekra, Dukh., a crab.
Darya-ka-narel, Hind., Sea-cocoanut of Seychelles, Lodoicea Seychellarum; Darya-ka-shekhra, Whiting fish.
Dasa, Tel., Panicum fluitans.
Dasa Kamaracharita. See Dandi.
Dasana, also Japa pushpamu, Tel., Hibiscus rosa-sinensis.
Dasawri, Hind., Barley.
Dash bahoo, Beng., Pardanthus Chinensis.

Dashri of Panjab, Ficus glomerata.
Dasht-i-be-Daulat, Valley of Baluchistan.
Dasht-i-Kipchak. See Kalmuk.
Dashtupa chottu, TEL., Dœmia extensa, Asclepias echinata.
Dasre, TEL., Cucumis utilissimus.
Dass, HIND., Colebrookia oppositifolia, also Elsholtzia polystachya.
Dasta, NEPAL., Spelter.
Dastar, HIND., a turband. See Clothing, 748.
Dastparisha, SANSK., Tragia involucrata.
Datchanayanam. See Hindu, 66.
Date-plum of China, Diospyros kaki, D. lotus.
Da-tha-lwon, BURM., Moringa pterygosperma.
Dati. See Parkhar.
Datira, MAHR., Urostigma t'siela.
Datisca. See Dyes.
Dat-ki-bhaji, DUKH., Amarantus oleraceus.
Datoke? Grislea tomentosa.
Datuphal, HIND., Emblica officinalis.
Datura stramonium, Thorn apple, Stramonium.
Daucus carota, Carrot.
Daud Khani, Beardless white wheat.
Daula Bore. See Bore.
Daun kitsjil, MALAY, Melaleuca cajaputi.
Daun lacca, MALAY, Lawsonia alba.
Daurani. See Afghanistan, 30; Ahmad Shah.
Dava-datsi, TEL., Vitis vinifera.
Davahdarum, Erythroxylon monogynum.
Davanamu, TEL., Artemisia.
Dava-pu, MALEAL., Guettarda speciosa.
Davette, SINGH., Carallia Zeylanica.
Davodee, ARAB., a coat of mail.
Davolia, HIND., Eragrostis cynosuroides.
Dawa-i-Mubarak, HIND., PERS., Clerodendron siphonanthus.
Dawaniya, SINGH., Grewia tiliæfolia.
Dawanum, TEL., Southernwood.
Dawari. See Afghanistan.
Dawata gaha, SINGH., Carallia lucida.
Da-way-hmi-ne, BURM., Quisqualis Indica.
Dawezai clan. See Afghanistan.
Dawi, HIND., Grislea tomentosa.
Daw-nee, BURM., Eriolæna, *sp.*
Dawudputra. See Deserts, 926.
Dawu-gas, SINGH., Conocarpus latifolia.
Dawul kurundu, SINGH., Cassia lignea.
Dawura, MAHR., Conocarpus latifolia.
Dawwar-us-Shams, Turnsol.
Dayal, HIND., Copsychus saularis.
Dead Sea. Hot Springs, 111.
Death's-head moth, Acherontia satanas. See Insects.
Debar of Nepal, Sypheotidis Bengalensis.
Debdari, BENG., Guatteria longifolia.
Deb-dhaniya, BENG., Sorghum vulgare.
Deb-kancham, BENG., Bauhinia purpurea.
De Boigne. See Perron.
Deb raja. See Bhutan.
Debul. See Dabul.
Decapodes. See Crustacea.
Decapolis. See Commerce, 789.
Decaschistia crotonifolia, Girardinia Leschenaultiana.
De Conto, Portugal.
Dedes, Kasturi, Rase, MALAY, Castor, Civet.
Ded'h. See Cutch.
Deer tribe, *sp.* of the genera Axis, Cervulus, Moschus, Memimna. See Cervidæ; Mammalia.
Defrunoos yunani, Cannabis sativa.
Degar, BEAS, Ficus oppositifolia.
Dehgan, a name of the Tajak race.
Dehi, SINGH., Citrus bergamia, Lime.
Dehra. See Himalaya.
Dein, Tani, KASH., Rice, Oryza sativa.
Dekhan. See Horse, 105; Hyderabad.
Dekhani hemp, Bombay. See Ambari; Hibiscus cannabinus.
Del, SINGH., Artocarpus hirsuta, also A. pubescens and A. nobilis.
Dela, HIND., Jasminum hirsutum.
Delabechia rupestris and Brachychiton Delabechei. See Bottle Tree.
Delâdha, the reputed tooth of Buddha.
Dela kura, TEL., Amarantus polygamus.
Dele, Dela, HIND., Capers, Capparis plant.
Delight of the Woods, Hiptage madablota.
Dellamadoo, TEL., Terminalia tomentosa.
Delphinæ, Dolphins, Cetacea, Sirenia, Whales.
Delphinium. See Dyes.
Delphinus phocæna, Phocæna communis.
Demer, HIND., TURK., Tamarind.
Demetrius. See Bactria, 222.
Demoiselle crane, Anthropoides virgo.
Demons. See Deserts, 926.
Demons of Tang-Chan. See Bore.
Dendlu, HIND., Hypericum perforatum.
Dendrobium, Orchiaceæ.
Dendrocalamus monadelphus, Oxytenanthera Thwaitesii.
Dendrophidæ. See Reptiles.
Dendru, HIND., Lonicera quinquelocularis.
Dengooya khara, BENG., Amarantus lividus.
Denthar, HIND., Callicarpa incana.
Dentura, HIND., Hyoscyamus niger, also Phytolacca decandra.
Deodar, BEAS, SUTLEJ, Cupressus torulosa, Cedrus deodara; Devidar, Juniperus excelsa. See Coniferæ.
Deodaru, DUKH., Sethia acuminata.
Deo-dhan, BENG., Andropogon saccharatum.
Deogarh. See Coal, 752.
Deoghar. See Dowlatabad.
Deo kanchanamu, TEL., Bauhinia acuminata.
Deokhadir, HIND., Mimosa rubicaulis.
Deo-koti, HIND., Celosia argentea.
Deo-mooga, HIND. See Bombyces; Insects.
Deo-Tal. See Lakes; Yunam.
Dephal, BENG., Artocarpus lacoocha; Dephal dampel, BENG., Xanthochymus pictorius.
Derajat Canals. See Canals.
Dermatochelys coriacea. See Reptiles.
Dermatophilus, Pulex penetrans.
Dervis. See Faqir; Rafai.
Deshasth. See Brahman, 482.
Deshi mullika, BENG., Jasminum sambac.
Deshmanthus cinereus, Dichrostachys cinerea.
Desideri. See Tibet.
Desi gokru, BENG., Tribulus alatus.
Desmodium gyrans, Telegraph plant.
Detander of Pliny, Lepidium sativum.
Detara, BENG., Lipeocercis serrata.
Detardana, HIND., Seed of Uraria picta.
Dev. See Spirit-worship.
Devachan (abode of the blessed)—Sukhavati.
Deva-daru, TAM., Guatteria longifolia.
Deva-dasa. See Basavi.
Deva-dasa, SANSK., Dancing girls.
Deva-dhupa, HIND., Benjamin.
Deva kanchan, BENG., Bauhinia.
Devala. See Divination.
Devata-dhanyamu, TEL., Sorghum saccharatum.
Devatadi dhettu, TEL., Lipracercis serrata, Andropogon serratum.
Devata-malle, TEL., Randia uliginosa.
Devatharam, TAM., Erythroxylon areolatum?
Dévil nettle, ENG., Laportea crenulata.
Devil-priest—Kattadia.
Devil's salep, Cicuta virosa, also Conium maculatum.
Devil-worship. See Hindu, 64.
Dewadari, TEL., Sethia Indica.
Dewa-dhari, Damsels of wisdom.
Dewadooroo, SINGH., Fennel seed, Fœniculum panmori, written also Dewadurio.
Dewak, HIND., White ants, Termes.
Dewantsi pilli, TEL., Lemuridæ, Loris gracilis.
Dewasthan. See Inam.
Dewata-gass, SINGH., Carallia lucida.
Dewul, SINGH., Feronia elephantum.
Deya-danga-gass, SINGH., Spathodea Rheedii, *sp.*
Deyamiddella, SINGH., Barringtonia racemosa.
Deyngan, HIND., Hemigymmia Macleodii.
Dha, also Dhai and Dhaiti, HIND., Grislea tomentosa.
Dhabbar, HIND., Anagallis arvensis.
Dhae, Dhub, Dhanga, BENG., Grislea tomentosa.
Dhak'h of Kashmir, Phaseolus lunatus.
Dhal kalmi, BENG., Calonyction Roxburghii.
Dhama, Damiya, N.W.H., Fagonia cretica.
Dhaman, HIND., *sp.* of Grewia and Pennisetum cenchroides.
Dhami. See Hill States.
Dhamin, MAHR., Butea Gibsonii.
Dhamma, SANSK., Law.
Dhamni, DUKH., Helicteres isora.
Dhamni, Falsa, HIND., Grewia Asiatica.
Dhamur of Ladakh, brick tea, green tea.
Dhan, BENG., HIND., Oryza sativa.
Dhangar. See Berar.
Dhanicha, Dunchi, HIND., Sesbania aculeata.
Dhaniya, HIND., Coriandrum sativum.
Dhantika, Sulambra, BEAS, Odina wodier.
Dhanur-vidya, SANSK., Archery, the art of war.

Dhanya-bhedam, TEL., a variety of wheat.
Dhanyali, HIND., Adelia serrata.
Dhao of Kangra, Conocarpus latifolia.
Dhaoli Dhar. See Kangra.
Dhar-karela, HIND., Momordica dioeca.
Dharma, SANSK., Law, Ordeal.
Dharmaraja or Choigyal. See Bhutan.
Dharmarcha. See Divination.
Dharmsala. See Kangra.
Dhataki-kusumamu, TEL., Grislea tomentosa.
Dhatri-phal, HIND., Emblic myrobalan.
Dhatura, HIND., *sp.* of Datura, D. fastuosa and D. stramonium.
Dhawa, HIND., Grislea tomentosa.
Dhena, BENG., Vitis elongata.
Dhengi, a boat of the Ganges river.
Dhengun, HIND., Cordia Macleodii.
Dhenrus, BENG., Abelmoschus esculentus.
Dher, HIND. See Pariah.
Dher-hay, Felis pardus.
Dherwara. See Cave Temples, 610.
Dhimal. See Boro, 420.
Dhindaga, CAN., Pterocarpus marsupium.
Dhingra kundi of Kangra, Cajanus Indicus.
Dhivus, MAHR., Dalbergia Ujjainensis.
Dhobi's earth. See Alkali.
Dhobia chil, BENG., Haliastur Indus.
Dhokeswar, i. 612.
Dhole, SINGH., Cuon rutilans.
Dholpur. See Hindustan, 80.
Dhol shumoodra, SANSK., Loea, *sp.*
Dhon-patta, HIND., Conocarpus latifolius, used in tanning and dyeing.
Dhooli-bans, BENG., Dendrocalamus balcooa.
Dhoona resin, HIND., Vatica robusta.
Dhoondool, BENG., Luffa pentandra.
Dhor, HIND., Leather-workers.
Dhote or Dhat. See Deserts, 920.
Dhoti. See Clothing, 747, 748.
Dhoulee of Kumaon, Hymenodyction excelsum.
Dhoul papri in Kumaon, Ulmus integrifolia.
Dhoura, HIND. of Kumaon and Panjab, Lagerstrœmia parviflora.
Dhoura, HIND., Swietenia chloroxylon.
Dhourra, Shair, ARAB., Hordeum distichon?
Dhowna, Mustaru, HIND., Wormwood.
Dhritarashtra. See Duryōdana; Pandu.
Dhūb, HIND., Agrostis cynosuroides.
Dhudi, BEAS, Ficus virgata.
Dhummul. See Dam-i-Madar.
Dhumnar. See Cave Temples, i. 610.
Dhunnes, HIND., Buceros Tickelli.
Dhun siris, PANJ., Albizzia elata.
Dhunu, HIND., Picea pindrow, Silver fir, also Taxus baccata.
Dhun-ul-kherwa, ARAB., Castor-oil.
Dhup, CAN., Canarium strictum.
Dhup, Dhupa, PANJ., Dolomiea macrocephala.
Dhura, HIND., Ficus caricoides.
Dhura or Zura, ARAB., Sorghum vulgare.
Dhureecha—Kurao.
Dhurri panch ranga, Carpet, Rug.
Dhūrū, HIND., Buddleia crispa.
Dhyan, Deyngan, HIND., Cordia Macleodii.
Dial bird, Copsychus saularis.
Diar of Hazara, Cedrus deodara.
Diarbakr. See Orfa.
Diardigallus. See Phasianidæ.
Dias. See Bartholomew Dias; Portugal.
Diatomaceæ. See Hasan Yusuf.
Dib, HIND., Typha angustifolia, also Eragrostes cynosuroides.
Dib grass, Typha, *sp.*
Dibang river, i. 437.
Dibya. See Divination.
Dicœinæ. See Sun Birds.
Did-band, HIND., also Makhi, the sight at the breech of a cannon.
Diddani, HIND., Astragalus multiceps.
Didelphis macrotarsus, Tarsius spectrum.
Didrian, HIND., Cœsalpinia sepiaria.
Didriar of Ravi, Mimosa rubicaulis.
Didropsis gutta, Isonandra acuminata.
Dichrostachys cinerea, Acacia cinerea.
Dicliptera repens, Rungia repens.
Die-du-let, BURM., PANJ., Cotton tree, Bombax heterophylla.
Dier, Farid-buti, HIND., Cocculus villosus.
Dier hier, HIND. of Kash., Menispermum hirsutum.
Digambara, or Sky-clad. See Jain.
Dihang river, i. 437.
Dikamalli, DUKH., GUJ., HIND., Gardenia lucida.
Dila, HIND., Odina wodier, Arundo phragmites, Cyperus tuberosus, Scirpus maritimus.
Dila khafak, PUSHTU, the marten.
Dilli. See Mount.
Dil-pasand, Citrullus vulgaris, *var.* fistulosus.
Dilwarra. See Jain.
Dimmuk, HIND., Solenanthus, *sp.*
Dimocarpus lichi, Nephelium litchi.
Dimocarpus longana, Euphoria longana.
Dimorphanthus edulis, Aralia edulis.
Dimorphocalyx glabellus, Trigonostemon Lawianus.
Dimri, PANJ., Cedrela tuna.
Din, HIND. See Creed.
Dinar. See Coins, 780.
Dindasa, HIND., Juglans regia.
Dinduga, CAN., Conocarpus latifolius.
Ding Dings. See Malay Peninsula.
Dinkard. See Parsee.
Dinkur Rao. See Sindia.
Dinsa, HIND., Ilex dipyrena.
Dintena, TEL., Clitorea ternatea.
Dio, HIND., Pteris aquilina.
Diodotus. See Bactria, 221.
Diomedea. See Albatross.
Diomedes. See Bactria, 222.
Dionæa. See Carnivorous Plants.
Dionysius. See Bactria, 222.
Dionysus. See Soma.
Diospyros mollis. See Dyes.
Dipa, PANJ., Typha angustifolia.
Dipa, SANSK., Dipam, TAM., a lamp.
Diphyllodes speciosa, Paradise birds.
Dipsadidæ. See Reptiles.
Dipteryx odorata, Tonkin Bean.
Dirasana, TEL., Acacia odoratissima, also A. speciosa, also Albizzia lebbek.
Dirgavartaka, SANSK., Brinjal.
Divi divi, Libi libi, Sumach.
Divi-kaduru, SINGH., Tabernæmontana dichotoma.
Divi Ladner. See Kaduru.
Divination. See Roman; Son.
Div-kina, wife of Hoa, i. 642. See Chaldees.
Divorced woman—Jehur.
Diwaniyah. See Chaldæa; Mesopotamia.
Diya rat mayl, SINGH., Jonesia Asoka.
Dizfal. See Karun River.
Doab—Jumna.
Doanniya—Khampti.
Dobe. See Brahmans, 431.
Dobsoon-noor. See Lakes.
Doda, HIND., Papaver somniferum, also Pyrus Kumaonensis; Gul doda, Mal doda, Leucas cephalotes.
Dodak, HIND., Sonchus ciliatus.
Dodal-konga, TEL., Leptoptilos Javanica.
Doddi pashanam, TEL., Sulphuret of arsenic.
Dodhan, HIND., Sapindus acuminatus, S. detergens.
Dodru, HIND., Ilex dipyrena.
Dodur, HIND., Cæsalpinia sepiaria.
Dœdi-gaha, SINGH., Memecylon ramiflorum.
Dog, wild, Cuon rutilans. See Canidæ.
Doggali kura, TEL., Amarantus polygamus.
Dogra. See Kashmir; Rajputs.
Dogwood, Cornus macrophylla.
Dok, JAV., Arenga saccharifera.
Dokeswa, HIND., Elettaria cardamomum medium.
Dokhma. See Parsee.
Dokhn, ARAB., Setaria Italica.
Dok-ka-det, BURM., Connarus monocarpus.
Dok-ta-tsha, BURM., Sulphate of copper.
Dolichandrone Rheedii, Spathodea Rheedii.
Dolichos bulbosus, Pachyrhizus angulatus. See Fibres.
Dolichos cultratus, Lablab cultratum.
Dolichos ensiformis, Canavalia gladiata.
Dolichos lablab, Lablab vulgare.
Dolichos psoraloides, Cyamopsis psoraloides.
Dolichos soja, Soja hispida.
Dolichos tetragonolobus, Psophocarpus tetragonolobus.
Dolichos virosus, Canavalia virosa.
Dollar. See Coins, 780.
Dolmen. See Cromlech; Kistvaen.
Dolomite. See Cement.
Dolphins. See Cetacea; Delphinus.
Dom. See Kashmir.
Dom, Tafi, ARAB., Borassus flabelliformis.
Domba gass, SINGH., Calophyllum inophyllum.
Dombeya excelsa, Araucaria excelsa.
Dome. See Architecture, 144, 145.
Do-mooti, BENG., Hydrocera biflora.
Dona, SANSK., Wormwood.
Donda, TEL., Coccinea Indica; Donda kura, Byronia grandis.
Donga. See Carriage.
Dongi dongi, MAL., Eucheuma spinosum.
Do-ni, BURM., Nipa fruticans.
Donkia Pass. See Ashneh; Borrera.
Doodh-kalmi, Ipomœa turpethum.
Doodi, TAM., a coin=10 cash.
Doodi. See Coins.
Doodia picta, Uraria picta.
Dookken, ARAB., Sphæranthus hirtus.
Doolal-champa, BENG., Hedychium coronarium.
Dooli-champa, BENG., Sphenocarpus grandiflorus.

Doomoor, Beng., Ficus carica.
Doona Dammar, Hind. See Resins.
Doongarpur. See Hindustan, 80.
Doop, Baga doop, S. Can., Ailantus Malabaricus.
Doopada oil—Oils.
Doosiu—Torika.
Do-paharya, Hind., Pentapetes Phœnicea.
Do-patta, a scarf. See Clothing, 747; Cotton Manufactures.
Do-patte-luta, Hind., Ipomœa pescaprae.
Dor, Hind., Spiræa Lindleyana, also Arum curvatum.
Dorana, Singh., Dipterocarpus glandulosus.
Dorian, Eng., Durio zibethenus.
Dorla, Dukh., Solanum Jacquini.
Doronicum scorpoides. See Darun.
Dorville. See Tibet.
Dosa kaia, Tel., Cucumis sativus.
Dotus, Japan., Termes, White ants.
Double cocoanut, Lodoicea Seychellarum.
Douk loung, Burm., Dalbergia reniformis; Douk-ta-loung, D. glauca; Douk-ya-mah, Dalechampia pomifera; Douk-yat, Photinia serratifolia.
Doum palm, Hyphæne thebaica.
Dourauelle, Egypt., Holcus spicatus.
Downaniya, Singh., Grewia Asiatica.
Drab, Dimri, Panj., Cedrela serrata.
Draco. See Reptiles.
Dracocephalum Royleanum. See Balungu.
Dracunculus, Guinea-worm.
Dragon boats. See Boats, 400.
Dragon's blood, Pterocarpus draco. See Calamus.
Drakhya, Beng., Vine, Vitis vinifera.
Drakri of Beas, Cissus carnosa.
Draksha, Sansk., Vitis vinifera.
Drandu, Hind., Ilex dipyrena.
Drangdra. See Bhownuggur; Kattyawar.
Drange, Hind., Sagerotia oppositifolia.
Drangu, Hind., Berchemia, *sp.*
Dranguli, Jav., Cathartocarpus fistula, Cassia fistula.
Drannoo, Sind., Crotalaria burhia.
Dravida Prabandha, the Tamil Veda. See Aluvar.
Dravidian. See Aborigines; Architecture, 144; Central India; Central Provinces.
Dravira—Tamil.
Dress and clothing, 73. See Hindu; Khilat.
Drimycarpus racemosus, a timber tree of Chittagong.
Drinkhari, Hind., Datisca cannabina.
Drin-mor, Ladakh, Ursus, *sp.*
Drishadvati, the modern Caggar or Hakra. See Caggar.
Dro, Do, Tro, To, Ladakh, Triticum æstivum.
Dromaius. See Emu.
Dromedary. See Camel; Camelus.
Drongo, *sp.* of Shrikes. See Birds.
Drosera. See Carnivorous Plants.
Drought. See Famine; Food.
Drumbi, Dwarena, Tr.-Indus, Arundo karka.
Drun, Tibet., the Marmot.
Druse. See Karmati; Lebanon.
Dryiophidæ. See Reptiles.
Dryobalanops camphora. See Camphor.
Duarte Pacheco. See Portugal.
Dub, Arab., Boar.
Dūbh, also Durbha, Hind., Cynodon dactylon.
Dubha-dibh, Egypt., Cucurbita lagenaria.
Duca, Tel., Conocarpus latifolia.
Duchesnea fragarioides, Fragaria Indica.
Duchid parah, Kash., Flying squirrel.
Ducks, *sp.* of Anas, Dafila, Aythya.
Dudal, also Dudh-batthal, Hind., Taraxicum officinale.
Duddhi, Hind., Euphorbia thymifolia.
Duddu, also Dudi, Tam., Karn., Mahr., a copper coin, a fourth part of a paisa. See Cash.
Dudduga, Tel., Guatteria cerasoides.
Dude-kula-vadu, Tel., a cotton-cleaner.
Dud-frus, Hind., Populus ciliata.
Dudha-par, Hind., Euonymus fimbriata.
Dudhi, Hind., Wrightia mollissima, W. antidysenterica.
Dudhia, Hind., Aconitum napellus; Dudhia-maura, A. ferox.
Dudhika, Hind., Nyctanthes arbortristis.
Dudhlak, Hind., Microrhynchus nudicaulis.
Dudh-luta, Oxystolma esculentum.
Dudi chettu, Tel., Abutilon Indicum.
Dudigapu chettu, Tel., Jatropha glandulifera.
Dudipa, Tel., Hymenodyction excelsum.
Dudi pala, Nela pala, Tel., Oxystelma esculentum.
Dud-ippi, Tel., Caroya arborea.
Dudiya-kalmi, Beng., Calonyction Roxburghii.
Dudla, Dudla jamu, Hind., Prunus padus, also Syringa emodi.
Dud-shambar, Hind., Desmodium tiliæfolium.
Dugga. See Boats, 393.
Dughdika, Hind., Sonchus orixensis.
Dugkenti, Hind. of Kaghan, Indigofera arborea.
Dugong, Halicore dugong. See Cetacea; Delphinidæ.
Duk, Eju, Gomuti, Jav., Arenga saccharifera.
Dukar, Mahr., Hog, Sus scrofa.
Dukhn, Arab., Millet.
Dukh-nirbisee, Hind., Cissampelos pareira.
Dukkon, Arab., Sphæranthus Indicus.
Dukout. See Joshi.
Dula, Hind., Abelmoschus ficulneus.
Dulagondi, Tel., Tragia involucrata; Pedda dulagondi, Mucuna prurita; syn. of Carpopogon pruriens; Dula-govela, Aristolochia Indica; Dulakanda, Arum campanulatum; Dula-kanchan, Mahr., Bauhinia acuminata.
Dulchirram, Tel., Acacia kalcora, an enormous tree on the Godavery; wood hard and reddish.
Dulgasses. See Knotsche.
Dulha, Arab., a bridegroom; Dulhan, a bride.
Dulia jhar. See Husbandry, 126.
Dul-mara, Can., Chikrassia tabularis.
Dum, Tali, Kash., Adiantum capillus veneris.
Dumba Sheep. See Wool.
Dumbar, Hind., Ficus goolereca.
Dumba-stacam, Tel., Alpinia galanga.
Dumki mirchi, Dukh., Piper cubeba.
Dumnar, a place famed for its Brahmanical rock-cut temples.
Dumsi, Nepal., Hystrix leucura.
Dun of Kashmir, Juglans regia.
Duna, Marwa, Hind., Artemisia Indica.
Dund, Pers., Arab., Croton tiglium.
Dunda. See Boats, 393.
Dunda-pu, Tel., Nyctanthes arbortristis.
Dundhwar, a name of amber.
Dundi birri, Arab., Jatropha curcas.
Dundilapu, Tel., Calosanthes Indica.
Dun doommale resin, Gum-resin of the Doona Zeylanica tree.
Dunceadar or Danyadar, a mode of address among fakirs.
Dunga. See Boats, 393.
Dung-beetle. See Insects; Lamellicorn beetles.
Duni-kaduru, Tabernæmontana dichotoma.
Duniya, Hind., Coriander seed.
Dunshing, Hind., Abies Webbiana.
Dun-siris, Hind., Acacia elata.
Dunti, Beng., Croton polyandrum.
Duntu pesala-kaia, Tel., Dolichos Tranquebaricus.
Dunuk, Hind., Aralia Cachemirica; Dunuk-dopaharia, Pentapetes Phœnicea.
Dupada, Tel., Vateria Indica.
Dupi, Tel., Axis maculatus.
Dup-salai, Hind., Boswellia thurifera, Olibanum.
Dur, Hind. of Kangra, Cedrela serrata.
Durbha, Hind., Cynodon dactylon.
Durbura (Dehli), a powder formed of disintegrated felspar.
Durdar, Hingur, Hind., Cinnabar.
Durga. See Parvati.
Durga Puja. See Jar.
Durgari, Panj., Albizzia stipulata.
Duriamaddi, Tel., Bridelia retusa.
Duri-har. See Jogi or Yogi.
Durio Zeylanicus, Cullenia excelsa.
Durma, Beng., Amphidonax karka.
Durmur, Hind., Xanthoxylon alatum.
Durra, Arab., Sorghum vulgare.
Duru, Singh., Cumin seed.
Durua. See Oman.
Durunga, Tr.-Indus, Artemisia.
Durunga, Hind., Artemisia elegans.
Durva, Sansk., Cynodon dactylon.
Dusara-tiga, Kattie-tige, Tel., Coculus villosus.
Dusbichundi, Beng., Morea Chinensis.
Duson. See Borneo, 419.
Dusta, Hind., Leptoptilos argala.
Dustoor. See Parsee.
Dutch rush or Horse tail, Equisetum hyemale.
Dutchna. See Parvati.
Dutt, from Datta, a gift. See Datta.
Duttea. See Hurdour.
Duyong, Malay, Halicore dugong.
Du yun yaing, Burm., Durio zibethenus.
Duz, Soa grandal, Salt Range, Asparagus Panjabensis.
Dwaita. See Charvaka.
Dwar. See Bhutan; Binji; Kamrup.
Dwarena, Hind., Arundo donax.
Dwarf almond, Cerasus Japonica.
Dwarf palm, Chamærops Khasiana.
Dwarpal, a door-keeper.
Dwija, Hind., twice born.
Dwipagustia, Sansk., Cassia alata.
Dyak. See Borneo.

Dynasties of S.E. Asia. See Chronology.
Dyupeti—Indra.
Dza-wet-tha, Burm., Ammonia, Hydrochlorate.
Dzightai, Equus hemionus.

E

Eagles. See Aquilinæ; Birds.
Eagle-stone, Hajr-ul-Akab.
Eagle-wood, Eng., Aquilaria agallocha.
Eagre, Chin., Boro.
Ear shells, *sp.* of Haliotidæ.
Earth-nut, Ground-nut, Arachis hypogea.
Earth-oil, Petroleum.
Earthenware. See Ceramic Manufactures; Porcelain.
Eastern Archipelago. See Archipelago.
Eastern Ghats—i. 449.
Eatty maram, Tam., Dalbergia sissoides.
Ebony—Diospyros, Bauhinia.
Ecballion elaterium, the Squirting cucumber.
Echa maram, Tam., Phœnix sylvestris, Urostigma tsiele.
Echeneis naucrates. See Fishes, 1115.
Echidna hystrix, Porcupine Anteater.
Echinodermata. See Zoophyte.
Echites antidysenterica, Holarrhena antidysentorica.
Echites dichotoma, Vallaris dichotoma.
Echites frutescens, Ichnocarpus frutescens.
Echites Malabarica, Chonemorpha Malabarica.
Echites spinosa, Carissa carandas.
Edagai kula, Karn., Left-hand caste.
Eda-kula-ariti, Tel., Alstonia scholaris.
Eddi, Tel., Andropogon contortus.
Eddo, of the Gold Coast, Colocasia antiquorum.
Eddu matta, Tel., Justicia tomentosa. The name signifies 'bullock-trampled plant.' Eddu mukku dumpa, also Eddu mutte dumpa, Pouzolzia tuberosa, meaning bullock-muzzle plant; Eddu nalike, Elephantopus scaber; Eddu toka dumpa, Dioscorea glabra.
Edentata. See Pengolin.
Edessa. See Orfa.
Edible nest, Swiftlet, Collocalia nidifica.
Edible sea-weed, Agar-agar, Ceylon moss.
Eed-uz-zoha, Arab. See Baqr-eed; Buckr Eed.
Eelachee, Hind., Cardamoms; a Muhammadan ceremony.
Eelandei, Tam., Zizyphus jujuba.
Eelcoppi, Tam., Bassia longifolia.
Eel tenki, Tel., Ætobatis nari nari.
Eenth, Maleal., Phœnix farinifera.
Eepaatta, Singh., Alangium decapetalum, A. Lamarkii.
Eepetta, Singh., Cyathocalyx Zeylanicus.
Eerpillakai, Tam., Artocarpus pubescens.
Eesara, Tel., Aristolochia Indica.
Eesha-nungula, Beng., Gloriosa superba.
Eeswara mamidi, Singh., Xanthochymus pictorius.
Eetcha maram, Tam., Phœnix sylvestris.
Egg plant, Solanum melongena.
Egilbir, Hind., Datisca cannabina.
Egisa, Tel., Pterocarpus marsupium.
Egret, *sp.* of Herodias; Demiegretta, Buphus ardeola, Butorides nycticorax. See Heron; Paddy-birds.
Egyptian lotus, Nelumbium speciosum.
Ehrabadra, a name of Virabadra.
Ehram, Arab., the pilgrim's habit.
Ehretia arenaria, Sand-binding plants.
Ehrb, Pushtu, Pyrus Kamaonensis.
Eilan, Eilaur, Ravi, Andromeda ovalifolia.
Eimu, Panj., Nemorrhœdus bubalina.
Ein, Hind., Urtica heterophylla.
Eing-gyin, Burm., Vatica robusta.
Eiyar, Tam., a father. See Ayar.
Eka. See Carriage.
Eka bhogam. See Gram.
Eka-dasi. See Dit'hwan.
Ekkudatige, Tel., Cardiospermum halicacabum.
Ekruk tank of Sholapur, i. 564.
Ekteer, Beng., Ophioglossum reticulatum.
Elachi, Hind.; Ela cheddi, Tam., Elettaria cardamomum.
Elachi, Dukh., Hind., Amomum cardamomum.
Elæocarpus copalliferus, Piney tree.
Elæococca montana, Vernicia montana.
Ela-imbul, Singh., Cochlospermum gossypium.
Elamite. See Babylonia, 218.
Elanji mara, Can., Zizyphus jujuba.
Elapidæ. See Reptiles.
Elater, a click beetle.
Elate sylvestris, Phœnix sylvestris.
Elavam, Pula maram, Tam., Salmalia Malabarica.
Elavum maram, Tam., Eriodendron anfractuosum.
Elburz, 17,746 ft. See Assassin; Caucasus, i. 609.
El-caja, Roka, Arab., Trichilia emetica.
Elchi, Hind., Pers., an ambassador.
El-dak-l-mirza, Arab., Anthemis nobilis.
Eleane of Egypt, Coffee berry.
Elemais. See Persepolis.
Elephant-apple tree, Feronia elephantum.
Elephant creeper, Letsomia nervosa.
Elephant goad, Ankus, Hind.
Elephant grass, Eng., Typha elephantina.
Elephant thorn, Acacia tomentosa.
Elephanta, i. 612.
Eleuth. See Kalmuk.
Elias. See Karund; Khizr.
Elika chavi kura, Tel., Hydrocotyle Asiatica.
Elimitcham, Tam., Citrus bergamia, Lime tree.
Elism saghma, Turk., Rainbow.
Elk, Alces machlis.
Ella. See Ikshwacu.
Ellal, Hind., Andromeda ovalifolia.
Ella midella, Singh., Barringtonia acutangula.
Elloe wanderu, Singh., Presbytis thersites.
Ello kalli, Tam., Euphorbia nivulia.
Ellendi, Tam., Zizyphus jujuba.
Ellora. See Architecture; Cave Temples; Sculpture, 610.
Ellu, Can., Gingelly seed.
Ell-ulli, Vellulli, Tel., Allium sativum.
Ellupa, Tam., Bassia longifolia.
Elm—Ulmus.
Elmyus. See Carex arenaria.
Elo of Chenab, Hordeum cœleste.
Elton, John. See Caspian Sea.
Elugu, Tel., Ursus labiatus.
Emba river. See Central Asia.
Emberiza hortulana, Ortolan.
Emblica officinalis, Phyllanthus emblica, Myrobalan. See Dyes.
Embroidery. See Filigree; Gold Embroidery.
Embryopteris. See Diospyros.
Embudi, Tel., Pisonia villosa.
Embural, Tam., Chay root.
Emerald. See Precious Stones.
Emeu. See Struthionidæ.
Emmenta, Hemanto, Tel., Ficus nitida.
Emyda. See Reptiles; Tortoise.
Enamel. See Arts; Colour.
Endaru, Singh., Ricinus communis.
Endic. See Flores.
Endra, Chenab, Hiptage madablota.
Eng, En, Ain tha, Burm., Dipterocarpus grandiflora.
English lady worshipper. See Central Provinces.
Engraulis. See Fishes, 1115.
Eng-yin, Burm., Hopea suava.
Enkasing, Hind., Berberis aristata.
Ennai carrai maram, Tam., Bassia longifolia.
Enoch, the same with Kapila, an incarnation of Vishnu.
Enos, Aram., Adam and Enos, the names of the first men.
Enscte, of Bruce, the Hindu Padma, the Lotos of the Nile.
Enuga bira, Tel., Elephant gourd, a large cucurbitaceous plant, Elephantopus scaber.
Enuga dula gandi, Mucuna gigantea; Enuga palleru, Pedalium murex.
Eonycteris spelæa. See Pteropodidæ.
Eopaata, Can., Alangium decapetalum.
Epander. See Bactria, 222.
Epe, Nara epe, Tel., Hardwickia binata.
Epi, Ippa, Tel., Bassia latifolia.
Epicarpurus orientalis, Trophis aspera.
Epidendreæ. See Orchiaceæ.
Epidendron vanilla, Vanilla aromatica.
Epimachus magnus, Paradise birds.
Equidæ, Horse, Mammalia.
Equula. See Fishes, 1115.
Equus. See Asinus.
Equus onager, Gorkhar.
Erabadu gass, Singh., Erythrina Indica.
Eram-naiko, Gond., Cuon rutilans.
Eran, Ellal, Beas, Andromeda ovalifolia.
Erandi, Hind., Ricinus communis.
Eratosthenes. See Chronology, 717.
Erech. See Babylonia, 218.
Erfuddi, a Bedouin tribe in Najd.
Ergot or Spur (Sclerotium clavus) is elongated in form, black externally, white and horny within, exceedingly deleterious in its properties, if long taken; in large doses acts specially on the womb. See Blight.
Ericene-veejo. See Hindu; Sakya Muni.
Erika, Maleal., Calotropis gigantea.
Erikata, Tel., Celastrus paniculata.
Erima pavel, Malay, Momordica dioica.
Erim-pannah, Tam., Caryota urens.
Eriobotrya Japonica, Loquat.

Eriochoir Japonicus. See Crustacea.
Eriophorum cannabinum, Cotton grass.
Ermina-kullie, TAM., Cacalia kleinia.
Erool of Malabar, Inga xylocarpa.
Eroombala maram, TAM., Ferreola buxifolia.
Eros, GR., the Hindu Kama.
Erpetoninæ. See Hydridæ.
Erra, TEL., Red colour, fair colour, as that of a man, or tawny complexioned.
Errandoos. See Chandragupta; Pataliputra.
Ertoghrul. See Othman.
Eruca sativa, LAM., Brassica.
Eru maddi, TEL., Pentaptera Berryi, P. angustifolia.
Erumbala, TAM., Maba buxifolia.
Erumitchi narakum, MALEAL., Citrus bergamia.
Eru pichcha, TEL., Clerodendron inerme.
Eruvalu maram, TAM., Inga xylocarpa.
Eruvanga, TEL., Solanum, *sp.*
Ervi, HIND., Caladium esculentum.
Erycidræ. See Reptiles.
Erysimum perfoliatum. See Oils.
Erysiphe taurica. See Fungus.
Erythrina monosperma, Butea frondosa.
Erythroxylon. See Coca.
Erzari or Orzari. See Turkoman.
Esar-Haddon. See Babylonia, 218.
Esbu, Esbi, of Sutlej, Hemitragus jemlaicus.
Esculapian rod. Serpent-worship.
Esculent caladium, Caladium esculentum; Esculent cyperus, Cyperus esculentus; Esculent okro, Abelmoschus esculentus.
Eshwurmul, BENG., Aristolochia Indica.
Eskamra. See Bhuvaneswara.
Eskar, CAN., a village servant, generally a Mhar, a low-caste man.
Esobh, of Scripture, supposed to be the Capparis Egyptiaca.
Espettes, SINGH., Cyathocalyx Zeylanicus.
Esukadanti kura, TEL., Giseckia pharnacioides.
Etamba (wild) mamidi, TEL., Mangifera Indica.
Ethiopian sour gourd, Adansonia digitata.
Eti chilla, TEL., Diliwaria ilicifolia; Eti malle, Polygonum tomentosum; Eti palla, Salix tetrasperma; Eti-pisinika, Clerodendron inerme; Eti puchcha, Citrullus colocynthis.
Etymander, the Helmand river.
Etzel, the Attila of historians.
Euchema spinosum, Gigartina spinosa. See Sea-weeds.
Eucratides. See Bactria, 221.
Eudemus. See Bactria, 221.
Eugenia aquea, Jambosa aquea.
Eugenia caryophyllata, Caryophyllus aromaticus.
Eugenia jambolana, Calyptranthes caryophyllifolia.
Eugenia pimenta, Pimenta officinalis.
Eugenia racemosa, Barringtonia acutangula.
Eulophia. See Orchiaceæ.
Eupatorium. See Ayapana.
Eupholi, Beautiful beetles of the Papuan Islands.
Euphrates. See Frat; Rivers.
Euplœa splendens, Dragon-fly.
Euplectella aspergillum, Venus flower-basket.
Eupodotis Edwardsii. See Bustard.
Euprepes Chinensis. See Reptiles.
Euproctis virgunculæ. See Drepana.
European plants. See Botany, 423.
Euterpe caribæa, Oreodoxa oleracea.
Euthydemus. See Bactria, 222.
Eve. See Havvah.
Everest. See Mount.
Everlasting flower, Gomphrena globosa.
Evodia triphylla, Xanthoxylon triphyllum.
Exacum bicolor. See Chirctta.
Exacum hyssopifolium, Cicendia hyssopifolia.
Excœcaria insignis, Falconeria insignis.
Exorcism. See Dawat.
Ezion-geber. See Commerce, 789.

F

FABA VULGARIS, Vicia faba.
Face-plant, Graptophyllum hortense.
Fadan, a predatory Bedouin tribe.
Fadaniya, HIND., Urinary and intestinal calculi, the bezoar stones.
Faduj, also Hajr-ul-bucher, ARAB., Bezoar.
Fagara piperita, Xanthoxylon piperitum.
Fagara triphylla, Xanthoxylon triphyllum.
Fagu, Phagwara, CHENAB, Ficus carica, F. virgata.
Fakhta, HIND., any dove, turtle-dove.
Fakus, EGYPT., Cucumis sativus.
Falconry. See Hawking.
Falcons, *sp.* of Falco, Erythropus, Hierax.
Falez, HIND., a field of melons.
Fallow deer, Dama vulgaris.
Falsa, HIND., Grewia Asiatica; its acid berry used to make a sherbet.
Falus, a coin. See Cash.
Falus mahi, ARAB., Strychnos nux vomica.
Falwa, also Farri, HIND. of Salt Range, Grewia elastica.
Famine. See Cuttack; Food; Orissa.
Fan, CHIN., Barbarian.
Fan-fish, Histiophorus, Sailor-fish.
Fanam, TAM., a coin=80 cash.
Fang-chang, CHIN., a Buddhist abbot.
Fang-tang-san, CHIN., the radicles of a campanula, used in syphilis.
Fan-hung-hwa, CHIN., Crocus sativus, Saffron.
Fan-kia, CHIN., Lycopersicum.
Fan-kwai, CHIN., aboriginal imp.
Fan-lan-mo, CHIN., Brahma.
Fan-lih-chi, CHIN., Anona squamosa.
Fannas, MAHR., Artocarpus integrifolius.
Fan-palms, Corypha umbraculifera, Talipot; Livistonia rotundifolia.
Fan-shi, CHIN., Pumice stone.
Fan-shih-liu, CHIN., Psidium pyriferum.
Fantail, Birds of the genera Leucocerca, chelidorhynx, cryptolopha.
Fan-tal, in China, the Superintendent of Finance. See Kwang-tung-chi.
Fan-yan-ma, the Chinese name of Bamian. Chinese remark that in the winter season the inhabitants take refuge in caverns cut out of the rocks.
Faras, PANJ., Tamarix articulata.
Farayga, ARAB., the night of discernment.
Farentit, ARAB., Guinea-worm.
Farfun, Akal-nafzah, ARAB., Euphorbium.
Farid Kot. See Cis-Sutlej.
Farid-ud-Din Attar—Sufi.
Fariyah. See Talikan.
Farri, Phalwa, HIND., Grewia vestita.
Fars. See Khogilu.
Farz, ARAB. See I'd.
Fa-shun. See Boats, 400.
Fast-days. See Phalaha.
Fatimide. See Karmati.
Fatsia papyrifera, Rice-paper plant.
Fazl Abu Ali, Talikani. See Sufi.
Feather Star, Comatulæ.
Feathers. See Bird Feathers.
Fei-tsan-kiah, CHIN., Acacia rugata.
Fennel, Fœniculum vulgare.
Fennel flower, Nigella sativa.
Fenny, a river in Noakully district.
Fen tree, Sethia Indica.
Fenugreek, ENG., Trigonella fœnum-græcum.
Fen yuen, CHIN., White lead, Cerusse.
Ferash, Frash, Jhao, HIND., Tamarix gallica.
Fergusson, James. Architecture.
Ferishta. See Bijpur.
Feronia pellucida, Ægle marmelos.
Ferraria crocea, Pardanthus Chinensis.
Ferreola buxifolia, Maba buxifolia.
Ferula orientalis, Dorema ammoniacum.
Feshuk, AR., Dorema ammoniacum.
Fever nettle, Laportea crenulata.
Feverfew, ENG., Anthemis pyrethrum.
Ficus elastica is indigenous to Assam; the foot of the Metur Hills in Nowgong, as well as the Chardwar Forests in Durrung, abound with this tree.
Ficus glomerata, Covellia glomerata.
Ficus oppositifolia, Covellia oppositifolia.
Fida, Sadqa, ARAB., Sacrifice.
Fieldfare, Planesticus pilaris.
Figure-stone, or Agalmatolite.
Filaria medinensis, Guinea-worm.
Filfil-ahmar, AR., Cayenne pepper.
Filfil aswad, ARAB., Black pepper.
Filfil-mooeh, ABAB., Pepper root.
Filfil-u-daraz, ARAB., PERS., Chavica Roxburghii.
Filigree. See Gold Filigree.
Filuka, ARAB. See Boat, 392.
Finches, *sp.* of Fringillinæ.
Fin-whale, Balænopteras Indica. See Cetacea; Whales.
Firebacks. See Gallus; Phasianidæ.
Fireclay. See Clay.
Fire-fish, Scorpæna ruber.
Fire springs. See Ho Tsing.
Firman, PERS., Royal letters; literally an order.
Firozabad. See Chandwar.
Firozbadi, author of a Kamus.
Firoz Kohi. See Iranian Races.
Fisanni of Chenab, Hamiltonia suaveolens.
Fish roe. See Alauea Toli; Trubu.
Fish sounds, Air-bladder, Isinglass.
Fishing eagles, Pandion, Haliætus.
Fitan, HIND., a pelican.
Fitch or Vetch. See Tare.
Fitch, Ralph. See Palibothra.

Fibrauliun fitura, PUSHTU, Prangos pabularia.
Flacourtia stigmarota, Phoberos Roxburghii.
Flamingo, Phœnicopterus roseus.
Flassu, CHENAB, Populus ciliata.
Fleabane, Serratula anthelmintica.
Flea-killer, Plectranthus rugosus.
Flindersia Australis. See Cedar.
Floralia. See Phul.
Florentine iris, Oriss root.
Florikin. See Bustards; Otididæ; Sypheotides Bengalensis.
Fly. See Deburah; Insects.
Fly-catchers, *sp.* of the family Muscicapidæ.
Flying cat, *sp.* of Galeopithecidæ and Lemuridæ.
Flying fish. See Exocetus.
Flying fox, *sp.* of Galeopithecidæ and Lemuridæ; Pteropus, *sp.*, Bats.
Flying lemur, Flying macaco. See Lemuridæ.
Flying squirrels, *sp.* of Pteromys, Pt. sciuropterus.
Fo, the Chinese name of Buddha.
Foal foot, Asarum Europæum.
Fœniculum panmori, Anethum panmori.
Food-grain produce. Hindu, 72; Hindustan, 83; Husbandry, 127.
Food-offerings, Prasada.
Fooful, ARAB., Betel nut.
Foot-print, Parasnath.
Forbidden fruit, Tabernæmontana dichotoma; also Citrus paradisi.
Formica, a genus of Ants.
Fossil remains. Geology; Siwalik.
Four-horned antelope, Tetraceros quadricornis.
Fowls. See Gallus; Phasianidæ.
Fox, Vulpes, *sp.*
Fox bats, *sp.* of Pteropus.
France. See Cochin-China; Commerce, 793; East India Company.
Frangipani trees, Plumeria rubra? *sp.*, Pl. acutifolia.
Frankincense. See Boswellia.
Frigate bird, Attagen aquilus.
Fringing or shore reefs. See Coral and Barrier Reefs.
Frogmouth, Batrachostomus moniliger and Otothrix Hodgsonii.
Frontier of Hindustan, 83.
Fucaceæ. See Laminaria; Seaweeds.
Fucus lichenoides, Ceylon moss; Gigartina spinosa.
Fucus spinosus, Euchcuma spinosum.
Fuh, Madder.
Fuh-kia-rh, CHIN., Datura stramonium.
Fuh-kung, CHIN., Leviaticum.
Fuh-ling, CHIN., Pachyma cocos.
Fuh-yih, CHIN., Bat.
Ful, EGYPT., Vicia faba.
Ful, ARAB., Jasminum zambac.
Fulah, in Africa, a race estimated at eight millions.
Fule-he. See China, 688.
Fullers' teasel, Fullers' thistle. See Teasel.
Funarus, YUNNANI, Cyperus hexastachyus.
Fung-fo-shan—Kum Fa.
Fung-hiang-chi, CHIN., Storax.
Fungi. See Coffee Planting, 776-77; Phosphorescence.
Fung-mih, CHIN., Honey.
Fu-p'ien, Tseh-tsze, CHIN., Aconitum variegatum.
Furbiune, MOROCCO, Euphorbia Canariensis.
Furj-baj, BENG., Spilornis cheela.
Furrud pangra, HIND., Erythrina Indica.
Fu-sang, CHIN., Althæa rosea.
Fu-yu-kiah, CHIN., Haliotidæ.
Fu-yung, Mu-fu-yung, CHIN., Hibiscus mutabilis.

G

GAARLA PHALLA, MALEAL., Anamirta cocculus.
Gab, HIND., Diospyros embryopteris.
Gabbelay, TEL., Flying fox.
Gab'r, a Parsee.
Gabra, Gulga, BENG., Nipa fruticans.
Gach, HIND., Coriaria Nepalensis.
Gachcha chettu, TEL., Guilandina bonduc.
Gach mirich, BENG., Capsicum annuum.
Gadabuni, HIND., Trianthema decandrum.
Gadancha, BENG., Tinospora cordifolia.
Gadang-castila, BALI, Carica papaya.
Gadara. See Alakh; Mendicants.
Gadda kanda, TEL., Colocasia esculenta.
Gadda nelli, TEL., Celtis orientalis.
Gadda-pisinka, TEL., Grislea tomentosa.
Gaddi, a Kashmir tribe.
Gadhul, HIND., Cheiroptera; Flying Fox; Pteropodidæ.
Gadi, HIND., Pillow, Throne.
Gadide-gadda-pu, TEL., Aristolochia bractenta.
Gadi sugandhi, TEL., Hemidesmus Indicus.
Gærtnera racemosa, Hiptage madablota.
Gagra, Kanaujia, Rivers.
Gahala, Tadala, SINGH., Colocasia antiquorum.
Gaharu, Alua-tan, MALAY, Aloes.
Gairun, DUKH., Calculus cysticus.
Ga-ja chinno, TEL., Celastrus montana.
Gaja-nimma, TEL., Citrus bergamia.
Gajapati. See Kalinga.
Gaja pippali, TEL., Scindapsus.
Gaji, Godari, TEL., Grislea tomentosa.
Gajooloo-balija, TELING, Bangle-makers.
Gaju chettu, TEL., Solanum pubescens.
Gal, BHOT., a glacier.
Gal, or Mitha kaddu, HIND., Benincasa cerifera.
Galancha, BENG., Tinospora cordifolia.
Galanga cardamoms, Alpinia galanga.
Galcha State. See Central Asia; Karatagin.
Galedupa Indica, Pongamia glabra.
Galega purpurea, Tephrosia purpurea.
Galeopitheous. See Flying Cats.
Galicha, HIND., Carpet, Rug.
Galijeru, TEL., Trianthema obcordatum.
Galim, Zuli, ARAB., Carpets.
Galla of Sutlej, Cupressus torulosa.
Galla race. See Semitic Races.
Gallinæ. See Phasianidæ.
Gallinago. See Scolopacidæ; Snipes.
Gallophasis. See Pheasant.
Gal-marium, HIND., Adiantum capillus veneris.
Galmendora gass, SINGH., Cynometra ramiflora.
Galung-gong Mount. See Java.
Gambe, EAST CELEBES, China grass.
Gambir, MALAY, Uncaria gambir.
Game birds. See Birds; Gallinæ.
Gammiria, SINGH., Piper nigrum.
Gampina, TEL., Odina wodier.
Ganapati—Parvati, Warangal.
Ganda biroza, HIND., Boswellia thurifera, Olibanum.
Gandamani, TAM., Abrus precatorius.
Gandangi, TEL., Presbytis priamus.
Gand bel? HIND., Andropogon nardus.
Gandharassamu, TEL., Gendarussa vulgaris.
Gandharvachanda—Indradwipa.
Gandho-bhadhuli, BENG., Pæderia fœtida.
Gandibuti, HIND., Glinus litoides.
Gandla, Gardala, KANJ., Bergera Konigii.
Gandlena, Gundalun, RAV., Daphne oleoides.
Gandno, Bina, BENG., Andropogon schœnanthus.
Gando-gaula, BENG., Viverra Malaccensis.
Ganer, Gandol, PANJ., Avena fatua.
Ganesa. See Saiva.
Ganes gumpha Cave, i. 612.
Ganga Bul. See Haramuk.
Ganga Chil, Ganges kite.
Ganga-jala. See Divination.
Gangaravi, TEL., Thespesia populnea.
Gangi, Inzare, TR.-IND., Grewia betulæfolia.
Gangotri. See Hot Springs, 111.
Gangri (Mountains). See Kailasa.
Ganhar, JHELUM, KANGRA, Amarantus anardana.
Ganhila, CHENAB, Premna mucronata.
Ganja, Bhang, HIND., Cannabis sativa.
Ganj-i-bar. See Manjha.
Ganpurgee, HIND., Arnotto.
Gan Talana—Kandelai.
Ganthian, HIND., Ipomœa reptans.
Ganti malle, of Salem, Chickrassia tabularis.
Gan-yan-pa-too, BURM., Clerodendron nutans.
Gaola. See Dhangar.
Gao Medha, SANSK., Cow sacrifice.
Gao zaban, PERS., Cacalia coccinea. Hart's ear, Anisomeles Malabarica, Trichodesma Indicum.
Gara or Gari chettu, TEL., Balanites Ægyptiaca.
Garass, BENG., Ceriops Roxburghianus.
Garden. See Bun-Otsarg.
Gardenia dumetorum, Randia, *sp.*
Gardi gavapu, TULU, Aristolochia bracteata.
Garges, Nikki, PANJAB, Grewia Rothi.
Garhwal. See Hot Springs; Lakes.
Garika kasuvu, TEL., Cynodon dactylon.
Gari kulay, BENG., Soja hispida.
Gariti kamma, TEL., Vernonia cinerea.
Garjan, BENG., Dipterocarpus turbinatus.
Garlic pear, Crataeva Roxburghii.
Garm-ab. See Jell.
Garm-massala, HIND., Spices.
Garna, Garunda, HIND., Carissa diffusa.
Garo Hills, i. 449. See Gardokh.
Garu, Kayu-garu, MALAY, Aloes-wood.

Garuda, CAN., Haliastur Indus.
Garuda Basavi. See Basavi.
Garur of Purniah, Leptoptilos argala.
Gashtasp. See Darius.
Gas-miris, SINGH., Cayenne pepper.
Gasr-kural-sabo, SINGH., Achyranthes aspera.
Gass-kahambillya, SINGH., Gorardinia, *sp.*
Gass-kappiteya, SINGH., Croton lacciferum.
Gast-freund, GER. See Brother-making.
Catha. See Parsee.
Gatte, TEL., Zizyphus xylopyra.
Gau-jangli, PERS., Gavæus frontalis.
Gaur, Gauri-gai, HIND., Gavæus gaurus.
Gauri—Parvati.
Gautama. See Josaphat; Zaydee.
Gauzereh, PERS., Bezoar, Calculus cysticus.
Gavæus. See Bison; Bovidæ.
Gavialis. See Crocodile; Reptiles.
Gawshor, PERS., Opoponax.
Gaya, a town of Bengal. Gayalese widowers are barred the privilege of wiving after the death of their first wife, as Hindu widows are barred the privilege of taking a husband after the death of their first lord.
Gayal, HIND., Gavæus frontalis.
Gaz, HIND. See Ilahi; Weights and Measures.
Gazella sub-gutturosa?—Antilopinæ.
G'beig, TIB. ? Goitre.
Geaster. See Fungus.
Gebang, Corypha gebanga.
Gebantæ—Okelis.
Geckotidæ—Reptiles.
Gedda, TEL., Kites.
Geer. See Kattyawar.
Geese, *sp.* of Anser, Sarkidiornis.
Gehela, MAHR., Randia, *sp.*
Gehlote. See Kach'hwaha.
Gelam butter. See Oils.
Gelasimus. See Crustacea.
Gems. See Precious Stones.
Genda, HIND., Rhinoceros.
Gendi, HIND., Chrysanthemum Roxburghii.
Gendoo, JAV., Galeopithecidæ, Lemuridæ.
Genetta Manillensis. See Civet; Mammalia; Viverra.
Gengaru, HIND., Cratoegus crenulata.
Gengwa, HIND., Excoecaria agalocha.
Gennæus. See Phasianidæ.
Gentiana cheyrata, Agathotes chirayta.
Gentiana hyssopifolia, Cicendia hyssopifolia.
Geodia Japonica, Venus flower-basket.
Geophilus fulgens. See Phosphorescence.
Georgia, i. 609.
Gesu Daraz. See Kulburga.
Gete — Saca, Indo-Scythi, Sun-worship.
Ghaias-ud-Din, Kai-Khusru.
Ghaias-ud-Din-bin Humam-ud-Din. See Kondamir.
Ghajar, Ghajari, ARAB., Gypsy.
Ghallah, ARAB., Grain.
Ghalme, HIND., Anabasis multiflora.
Gharat, Gani, of Ravi, Oxystelma esculentum.
Ghar-i-Jamshid. Arghandab; Kandahar.
Gharikun, ARAB., Agaric; Boletus igniarius, Agaricus igneus, Polyporus, *sp.*, used in medicine.
Gharra River—Hyphasis.
Ghasi. See Kol.
Ghas-kachoo, BENG., Typhonium flagelliforme.
Ghasvel, HIND., Cuscuta reflexa.
Ghata, SANSK., a flight of steps. Ghati, Races belonging to the Ghats of the Syhendri.
Ghatka patra, MAHR., Clepsydra.
Ghatwali. See Bhumij.
Ghaylulah. See Kaylulah.
Ghebu nelli, TEL., Premna integrifolia.
Ghega, Ghenga, HIND., Goitre.
Ghekool, TEL., Typhonium orixense.
Ghelani. See Abdul Kadar.
Ghenasa, CAN., TEL., Batatas edulis.
Gheru mitti, PERS., Bole Armenian.
Ghes, a Bedouin tribe.
Ghet-kuchoo, BENG., Typhonium orixense.
Ghiaturai, HIND., Luffa pentandra.
Ghidan, Biluch, a black tent.
Ghidro, SIND., Cucumis melo.
Ghi-gowar, HIND., Aloe Indica.
Ghi-ka-gadda, DUKH., Isoetes Coromandeliana.
Ghi-kumar, HIND., Agave perfoliata.
Ghilghirinta, TEL., Crotalaria verrucosa.
Ghimasag, Pharnaceum mollugo.
Ghinalita-pat, BENG., Corchorus capsularis.
Ghita-puja, Hindu, 65.
Ghongu kuru, TEL., Hibiscus cannabinus.
Ghoont. See Horse, 105.
Ghooty, trap-door spider, Cteniza, *sp.*
Ghorbasta. See Cyclopes.
Ghore-porc, HIND., DUKH., Iguana.
Ghore-sun, BENG., Crotalaria juncea.
Ghor-khar, Koulan, HIND., Equus onager.
Ghota-mar, HIND., Kingfishers.
Ghous, Gaoj, BENG., Rusa Aristotelis.
Ghous-ul-azam. See Abdul Kadar; Muhammadanism.
Ghrito-kumari, BENG., Aloe Indica.
Ghugu, HIND., *sp.* of Owls, genera Otus, Urria, Ketupa, Huhua.
Ghunia, TEL., Salvadora Persica.
Ghurghuria, HIND., Gryllotalpa vulgaris.
Ghur-hay, HIND., Felis pardus.
Ghus, HIND., Mus bandicota.
Ghuyan, Kachalu, PANJ., Colocasia antiquorum.
Ghwardza, PUSHTU, Cratægus oxyacantha.
Ghwareja, HIND., Edwardsia mollis.
Ghwarga, HIND., Arundo donax.
Ghylong, Lama priests. See Bhutan.
Gialbo, Tsong-kha-ba.
Giam, HIND., Cedrus deodara.
Gian, HIND., Premna mucronata.
Giana, TIB., Cervus Wallichii.
Gianhan, HIND., Elæagnus conferta.
Giant, the Rakshasa of the ancient Hindus, generally translated so.
Giant clam, Tridacne gigas.
Giant Petrel or Break-bones, Ossifraga gigantea, is the Nelly or Stinker of sailors.
Gibbon—Hoolock, Hylobates.
Gi-changi, TEL., Celastrus montana.
Gidar-dak, Cissus carnosa, Sageretia oppositifolia, Prunus padus.
Gidarmar, a vagrant and thief in Upper India (lit. a jackal-killer).
Gidar-tamaku of Shahpur, lit. jackal's tobacco, Philiphoea calotropidis, Heliotropium Europæum, Verbascum thapsus.
Giddarkumb, HIND., a fibre of Kangra.
Gidi, HIND., Francœuria crispa.
Gidia, HIND., Vagrants and thieves in Upper India.
Gidugudu, TEL., Casearia tomentosa.
Gigantic crane of Australia, the Mycteria Australis, or New Holland Jaberu.
Gigantic stork, Leptoptilos argala.
Gigantic swallow-wort, Calotropis gigantea.
Gigartina tenax, Eucheuma spinosum.
Gihain, HIND., Elæagnus conferta.
Gila-gacha, BENG., Entada pursetha.
Gila gaddi, Goli midi, TEL.; Coix barbata.
Gila goranta, TEL., Crotalaria verrucosa; Gilheri, DUKH., Sciurus palmarum; Gil'heri-mar, Aquila pennata, lit. squirrel-killer.
Gilakara, TEL., Cumin seed.
Gil Armoni, PERS., Bole Armenian.
Gilas, PANJ., Cerasus vulgaris.
Gilban, EGYPT., Lathyrus sativus.
Gilgit. See Iskardo.
Gilgiti, HIND., a kind of wheat.
Gillur ka patta, HIND., Laminaria saccharina.
Gilt-head, a fish of the S. Pacific of the genus Sparus.
Gilugudu, TEL., Casearia tomentosa.
Gima, BENG., Lady's bed-straw, Erythræa centauroides.
Gindol of Sumatra, Tapirus Malayanus.
Gingaru, HIND., Cratægus crenulata.
Gingelly oil, Sesamum Indicum.
Ginger-bread tree, Hyphæne Thebaica.
Gingko, Jinko, JAP., Salisburia adiantifolia.
Gira, Ghuzhbo, TR.-INDUS, Alnus nitida.
Girardinia Leschenaultiana, Urtica heterophylla.
Giri karnika, TEL., Alhagi maurorum.
Gir-khat, PERS., Galbanum officinale.
Girnar. See Architecture, 145; Jain; Junagarh.
Girthan, HIND., Fluggea leucopyrus, Sageretia oppositifolia.
Gita Govinda. See Jayadeva.
Gitti gadda, TEL., Isoetes Coromandeliana.
Gityarya, a Sanskrit metre.
Giur, HIND., Salix Babylonica.
Giwain, HIND., Elæagnus conferta.
Glam tree, Melaleuca viridiflora.
Glapa, TIB., Cultivator.
Glas, Altah, TIB.-TANGUT, Moschus moschiferus.
Glass Eel, *sp.* of Leptocephalus of Shaw, found on the Australian coast. It is from 4 to 8 in. in length. There are eighteen species of this genus, one of the Leptocephalidæ of Bonaparte.
Glass nautilus. See Carinaria; Mollusca.
Glass rope, Hyalonema Lusitanicum.
Glat-chandul, HIND., Gloriosa superba.
G'ling-gang, MALAY, Cassia alata.
Globba sylvestris, Alpinia nutans.
Globe flower, Sphæranthus hirtus.
Globocephalus. See Cetacea; Whales.
Glogos, GR., Milk; Gala-duah, SANSK., to milk; Duhitar, SANSK., a maiden daughter who milks (duh) the go (cow); hence Dochter, Tochter, Daughter, and Dug, the teat.

Gloriosa superba, Methonica superba.
Glossina morsitans. See Fly; Tse-Tse.
Glow-worm. See Phosphorescence.
Gluga, JAV., Broussonetia papyrifera.
Glycine Sinensis, Wistaria Sinensis.
Glycine viscosa, Dolichos glutinosus.
Gna-pi, BURM., Balachan.
Gnari, Western Tibet.
Gnayan patoo, BURM., Clerodendron nutans.
Gna yoke, BURM., Capsicum minimum.
G'ne-ta-thay, BURM., Bird nests.
Gnoo gyee, BURM., Cathartocarpus fistula.
Gnow, TIB., Ovis ammon.
Gnung-myect, BURM., Chrysopogon acicularis.
Gnwæ-ban, BURM., Graptophyllum hortense.
Goa, TIB., Procapra picticaudata.
Goa beans, Psophocarpus tetragonolobus.
Goa potato, Dioscorea aculeata.
Goat antelope, Gazella Bennettii.
Goat pepper, Capsicum frutescens.
Goats and sheep. See Bovidæ; Caprinæ.
Goats'-foot creeper, Ipomœa pescapræ.
Goatsucker. See Caprimulgidæ.
Gobay goru, BENG., Gavæus frontalis.
Gobi. See Deserts, 920; Kalmuk.
Gobur-chumpa, DUKH., Plumiera acuminata.
Godu mahanel, SINGH., Aucklandia costus.
Goduma-pindi, TEL., Flour of wheat.
Godwit, sp. of Limosa, L. macrorhampus.
Goga. See Deserts.
Gogam, TEL., Choloroxylon dupada.
Gogawut. See Dhondal.
Gogi. See Bijapur.
Gogird, PERS., Sulphur.
Gogi-sag, HIND., Malva parviflora.
Go-go of Manilla, Acacia abstergens.
Goia, TAM., TEL., Guava tree.
Goitre. See Galloor-ka-patta.
Gokak. See Cataracts; Waterfall.
Gokan, PANJ., Alhagi maurorum.
Gokantaka, SANSK., Asteracantha longifolia.
Gokaru, HIND., Pedalium murex; Gokru kalan, Xanthium strumarium.
Gokats Seku festival. See Oki-don-Tako.
Gokiura, Gokshura, HIND., Asteracantha longifolia.
Gokkar. See Kashmir.
Gokkatu, SINGH., Gamboge.
Goklen. See Turkoman; Yamut.
Gokshara, HIND., Asteracantha longifolia.
Gola gandi, TEL., Tradescantia axillaris.
Golaka. See Kunda-Golak.
Golakonda, TEL., Capsicum frutescens.
Golapilly. See Diamond.
Golaroo, SIND., Coccinea Indica.
Golatta koku, TEL., Nesokia Indica.
Goldar, DUKH., Sterculia guttata.
Golden berenice. See Ophir.
Golden eagle, Aquila chrysaetos.
Golden orange, Citrus Japonica.
Golden stream, Chrysorrhœa of the ancients, Barrada river of Damascus.
Golden-thread root, Coptis tecta.
Goliga, Mantika, MALAY, Bezoar.
Golivo, Korimidi, TEL., Coix barbata.
Gol-kakra, BENJ., Momordica Cochin-Chinensis.
Golkamila sama, JHELUM, Glochidion velutinum.
Gol-kundru, PANJ., Coccinea Indica.
Golu-mora, GEYLON, Cryptocarya floribunda.
Golunda Ellioti. See Coffee Planting, 774.
Gombroon. See Bunder Abbas; Harmozia.
Gomcha. See Clothing.
Gome, JAV., Rice.
Gomez, Lorenzo de. See Borneo.
Gond. See Central Provinces; Dravidian.
Gondar. See Insects.
Gond-badustar, HIND., Civet.
Gondni, Lasura, HIND., Cordia obliqua.
Gondopherres. See Bactria, 224.
Gonerdiya dynasty. See Kashmir.
Gongen Sama. See Oki-don-Tako.
Gooral, HIND., Nemorrhœdus goral.
Gooseberry, country, Cicca disticha.
Gooseberry tree, Averrhoa carambola.
Goowa mooree, BENG., Fœniculum panmori.
Gopala, a name of Krishna.
Gopura. See Architecture, 143.
Gor, ASSAM, Rhinoceros.
Gora. See Bhairava.
Gora-bach, BENG., Acorus calamus.
Gorak amli, HIND., Adansonia digitata.
Gorakhnath, a name of Siva.
Goranta, Iveni, TEL., Lawsonia inermis.
Gor-bacha, DUKH., Leopard.
Gori. See Hasn Gori.
Gorilla, Orang-utan.
Gor-ka-gu of Kashmir. See Pheasant.
Gorkhar, HIND., Equus onager, Wild ass of Cutch.
Gorkhee, BENG., Solanum pubescens.
Gorochana, SANSK., Bezoar.
Gorre chimidi, TEL., Andrographis echioides.
Goru chettu gadda, TEL., Eulophia virens.
Goru-chikudu, TEL., Cyamopsis psoraloides.
Gos-hawk, Astur trivirgatus.
Gossampinus rubra, Bombax Malabaricum.
Gossampinus Rumphii, Eriodendron anfractuosum.
Gotho, URIYA, Carissa carandas.
Gotti chettu, TEL., Zizyphus xylopyrus, Z. elliptica, and Z. caracutta.
Gouari, Gour, DUKH., HIND., Cyamopsis psoraloides.
Goughia Neilgherrense, Daphniphyllum Roxburghii.
Goundhan, MAHR., Diospyros cordifolia.
Gour, Gauri-Gai, HIND., Gavæus gaurus.
Goura coronata. See Pigeons.
Gourd, Beninccasa cerifera; Cucurbita maxima, Trichosanthes cucumerina.
Gourd, wild, Colocynth.
Gour-gia, PERS., Andropogon schœnanthus.
Govardhan. See Mount.
Govila, BENG., Vitis latifolia.
Govind. See Nanak.
Govind Kund. See Brindaban.
Gowreephal, DUKH., Rubus, sp.
Gowr-gia, PERS., Lemon grass.
Goyar, BENG., Plotus melanogaster.
Gozang, Kasamm, CHENAB, Avena fatua.
Gracillaria tenax, Eucheuma spinosum. See Agar-agar; Sea-weeds.
Graculidæ. See Phalacrocoracidæ.
Gradul, DUKH., Entada pursetha.
Græco Parthian. See Bactria, 223.
Grahana, SANSK., an eclipse.
Grahastasramam, Hindu, 66.
Grahilote—Kach'hwaha.
Grail. See Holy Fig Tree; Patra.
Gram, Dolichos uniflorus is Madras gram; Red gram is D. catjang; Bengal gram is Cicer arietinum; Green gram is Phaseolus mungo; Manilla gram is Arachis hypogea.
Grama-karana, SANSK., Accountant.
Grampus. See Cetacea; Delphinidæ.
Granatum litoreum, Xylocarpus granatum.
Graphite. See Black Lead; Plumbago.
Graptophyllum hortense, Caricature plant.
Grass cloth—Urticaceæ.
Grass oil of Nemaur, ENG., Andropogon Martini.
Grassya. See Cutch; Pramara.
Gratiola portulacacea, Herpestris monniera.
Grebe, sp. of Podiceps, Colymbidæ.
Grihashta, Householder.
Grimnas, BHOT., Hordeum cœleste.
Grosbeaks, sp. of Fringillinæ.
Grotte aux fées. See Cromlech.
Ground-nut, Earth-nut, ENG., Arachis hypogea.
Grouse, rock and sand, the family Pteroclidæ. See Tetraonidæ.
Grubs. See Bug; Coffee Planting; Crane; Insects.
Gryllotalpa Phanga. See Crickets; Insects; Phanga.
Gua, Kuthi? BENG., Areca catechu.
Guatteria coffeoides, Polyalthia coffeoides.
Guchi, HIND., Mushroom.
Guddi—Kohistan.
Gudi kum, also Gudia, HIND., Meconopsis aculeata.
Guduchi, SANSK., also Amurta, Tinospora cordifolia.
Gudumbat, HIND., Rhus vernicifera.
Guelder rose, Viburnum opulus.
Guguira. See Canals.
Gugal, HIND., Gugalam, TAM., Resins.
Gugal, Dup, BENG., Canarium strictum.
Gugal, SUTLEJ, Dolomiea macrocephala.
Gugula, SANSK., HIND., Balsamodendron agallocha.
Guggala, TEL., (resin) Vatica robusta, B'dellium.
Guguli, DEKHAN, Letsomia nervosa.
Gui, Sisterhood. See Brother-making; Oraon.
Guia-leggra, BENG., Sturnus cineraceus.
Guinea grains. See Melegueta Pepper.
Guinea-worm, Filaria Medinensis.
Gujerati. See Languages.
Gulandi, CAN., Golunda Elliotti.
Gulbadan. See Cloths.
Gul-bahar, HIND., Grislea tomentosa.

Gul baji, Gul abbas, HIND., Mirabilis jalapa.
Gul-chand, HIND., Gardenia florida.
Gul-dawadi, HIND., Chrysanthemum Indicum.
Guler, HIND., Ficus glomerata.
Guli, HIND., Argyreia speciosa.
Guli, TEL., Capparis grandis.
Gul-i-ajaib, HIND., Hibiscus mutabilis.
Gulimara, CAN., Zizyphus jujuba.
Gulivenda, TEL., Abrus precatorius.
Gul jafari purnka, KAGHAN, Villarsia.
Gul khaira, HIND., Althæa rosea.
Gullem chettu, TEL., Capparis grandis.
Gulli, DUKH., Coral.
Gulls, *sp.* of Larus, Kroikocephalus, Xema.
Gul-maidah—Jacynth.
Gul mukhmul, HIND., Gomphrena globosa.
Gul mumanni, Gul sparlei, HIND., Arnebia echioides.
Gul-shabu, HIND., Polianthes tuberosa.
Guluga, MALAY, Cinnabar.
Guluwan. See Kashmir.
Gul-wail, DUKH., Tinospora cordifolia.
Gumaddi kaia, TEL., Cururbita maxima.
Gumbari, BENG., Gmelina arborea.
Gumpana, TEL., Odina wodier.
Gumti—Kankrowlee Lake.
Gumudu-teku, TEL., Gmelina arborea.
Gumudu tige, TEL., Batatas paniculata.
Gunch, Retti, KASH., Abrus precatorius.
Guncha, HIND., Abrus precatorius.
Gund, Goondi, HIND., Cordia angustifolia.
Gundala, Gundra, TEL., Cyperus hexastachyus.
Gundatu, Kira-mar, DEKH., Aristolochia bracteata.
Gund barunghi, DUKH., Gunta barenga.
Gund bel, Olachs, HIND., Lemon grass.
Gundha-goorana. BENG., Andropogon glaber.
Gundho-bena, BENG., GUJ., Lemon grass.
Gundhuraja, SANAK., Gardenia florida.
Gund-mar, KASH., Wormwood.
Gundu meda, TEL., Celastrus paniculatus.
Gundun, MAHR., Ehretia ovalifolia.
Gunga-ravi, TEL., Rosewood.
Gunong Bermun. See Binua.
Guorami. See Fishes, 1115.
Guptipara. See Triveni.
Guranya alu, HIND., Dioscorea purpurea.
Gurasman Bahasht. See Parsee.
Gurayi, Guriya, GOND., Portax pictus.
Gurgan. See Hyrcani.
Gurga-naru, HIND., Bryonia laciniosa.
Gurha Mundala. See Durgontee.
Gurmalla, GUJ., Cathartocarpus fistula.
Gurnard, *sp.* of the Triglidæ, Fishes.
Gurrapu gatte aku, TEL., Clerodendron viscosum.
Gurrayin of Hurriana, Bustard.
Guruginja, TEL., Abrus precatorius.
Gurugu kura, TEL., Celosia albida.
Gurukatta, KANSK., Bole Armenian.
Guru Kot. See Kotegurh.
Gurusman. See Parsee.
Gurz, HIND., Mace.
Gushura, HIND., Root of Barleria longifolia.
Gusrah of Cis-Sutlej, sandy, unculturable soil.
Gutchka, Gudgega, DUKH., Guilandina bonduc.
Gutimar, HIND., Aquila hastata.
Gutti gunneru, TEL., Calpicarpum Roxburghii.
Guva gutti, TEL., Trichodisma Indicum.
Guvar-phalli, GUJ., Cyamopsis psoraloides.
Guya babula, HIND., Vachellia farnesiana.
Guzanjabin, HIND., Manna.
Gwai-douk, BURM., Connarus speciosa.
Gwalior. See Cave Temples, 611; Hindustan, 80-83; Sindia.
Gwal kakri, HIND., Bryonia umbellata.
Gya, TIB., a Barbarian.
Gymnodontidæ—Diodon, Fishes.
Gymnopleurus. See Copridæ.
Gynaion vestitum, Cordia vestita.
Gypaetus barbatus, Vulture.
Gyraspur. See Architecture.

H

HABAK, ARAB., Ocimum, *sp.*
Habash, a race in Africa; an Abyssinian.
Habilzai. See Afghanistan.
Hadar, Khadri, BEAS, Ribes.
Hadramaut. See Arabia.
Haenun, a name of Amoy.
Haft Khaneh—Karna-chapara.
Haft Tan. See Baba Yadgar.
Haiga. See Brahmans, 432.
Hai-hung, Hai-t'ang-li, CHIN., Cydonia Japonica.
Haikalzai. See Afghanistan.
Hai-kau, CHIN., Beaver.
Haik-khyæ, BURM., Sapindus emarginatus.
Hai-nah, CHIN., Lawsonia inermis.
Hai-piau-siu, CHIN., Cuttle-fish bone.
Hai-rh-cha, CHIN., Catechu.
Hai-tsai, Hai-tsau, CHIN., Agar-agar.
Hai-tsau, Tu-ja-tsai, CHIN., Algæ, Sea-weeds.
Hai-tsung, CHIN., Squill.
Haiyu—Kusunda.
Hajam, HIND., a barber in Central India; the village barbers, particularly the Muhammadan ones, have some knowledge of medicine; they also set broken limbs, and their wives usually act as midwives.
Hajong. See Borneo, 420.
Hajr-Armeni, ARAB., Bole Armenian.
Hajr-ul-Aswad, the black stone at Mecca.
Hajr-ul-Bucher, ARAB., Bezoar.
Hajr-ul-Musa, ARAB., Asphalte, Mommai.
Hakeem, a physician. See Hakim.
Hakin, Hakun, HIND., Croton polyandrum.
Hakorch, BENG., Dilivaria ilicifolia.
Hakuch, BENG., Psoralea corylifolia.
Hala, Halai, Halashi, RAVI, Rhus succedanea.
Halas. See Binua.
Halbeh, Shimlet, ARAB., Trigonella fœnum-græcum.
Haldi, HIND., Curcuma longa.
Haldi-algusi-luta, BENG., Cuscuta reflexa.
Haldi-ka-jhar, DUKH., Coscinium fenestratum.
Halelâ zard, HIND., Terminalia chebula, Myrobalan.
Haleluj, ARAB., Balanites Ægyptiaca.
Haleo, Harin, Hadu, PANJ., Cornus macrophylla.
Hal-gass, SINGH., Vateria Indica.
Hali. See Dom.
Hallastur Indicus, i. 437. See Birds.
Halicore. See Cetacea; Delphinidæ; Dugong.
Halim, Tara-tezak, HIND., Lepidium sativum.
Hali mara, CAN., Chrysophyllum Roxburghii.
Hali-moong, BENG., Green gram, Phaseolus mungo.
Halispongia, a genus of sponges, the genus Halichondria.
Haliun, HIND., Asparagus racemosus.
Hallabid. See Architecture, 146.
Halmillilla, Hammaniel, SINGH., Berrya ammonilla.
Halwa kaddu? HIND., Cucurbita maxima.
Halyun, Yeramya, ARAB., Asparagus officinalis.
Hamadan. See Esther.
Hamah. See Ismail Abulfida.
Hamat. See Gamut.
Hamaz, ARAB., Rumex acetosa.
Ha-mi. See Colquhoun.
Hamites in Africa, estimated at 20 millions.
Hamranzai. See Afghanistan.
Hamsa padi, TEL., (*a*) Heliotropium Coromandelianum, (*b*) Coldenia procumbens.
Hanbal. See Imam.
Hancornia speciosa. See Caoutchouc.
Hand-gul, KAGHAN, Cichorium intybus.
Hang-chow-fu. See Bore, 417.
Hangul, Honglu, KASH., Cervus Wallichii.
Hanja, PUSHTU, Acacia farnesiana.
Hanjika, also Chiri teku, TEL., a *sp.* of Clerodendron, a medicinal root.
Han-shwin-shih, CHIN., Calcareous spar.
Hansraj, PANJ., Adiantum caudatum.
Hanuman, HIND., Presbytis entellus. See Mammalia.
Hanway, Jonas. See Caspian Sea.
Hanzal, HIND., Acer cultratum, also root of Citrullus colocynthis.
Hapurmali, BENG., Vallaris dichotoma.
Har. See Basant.
Har, Harhar, HIND., Terminalia chebula.
Harbarah, DUKH., Cicer arietinum.
Harbarala, SINGH., Colocasia antiquorum.
Har charrul, HIND., Flacourtia sepiaria, Flagellaria Indica.
Hardaur. See Hurdour.
Hardwicke, General. See Birds, 367.
Harfaruri, HIND., Cicca disticha.
Hargela, Hurgela, HIND., Leptoptilos argala.
Har Govind. See Nanak.
Hari, HIND., Aristolochia Indica.
Hariali, Grass, Cynodon dactylon.
Hari Dass. See Tansen.
Hari Kiri. See Japan.
Hari-mandhakamu, TEL., Cicer arietinum.
Hari-Rud. See Herat.

Harischandra. See Sunahsephas.
Haritaka, SANSK., Terminalia chebula.
Harita manjari, TEL., Acalypha Indica.
Haritha, HIND., Sapindus detergens, S. acuminatus.
Harjora, HIND., Cissus quadrangularis.
Harka, CAN., Harmala ruta?
Harkuch kanta, HIND., Dilivaria illicifolia.
Harmal, Isband, HIND., Peganum harmala.
Harmala ruta, Peganum harmala.
Harmuchi, PANJ., Bole Armenian.
Harn, Antilope bezoartica.
Harna mus, HIND., Gerbillus Indicus.
Harpodon. See Fishes, 1116.
Har-puja. See Husbandry, 126.
Harput, KASH., Ursus, *sp.*
Harriers, *sp.* of Circus. See Birds.
Harrin-hara, HIND., Amoora rohituka.
Hartal, HIND., Orpiment.
Hartighsea spectabilis. See Cedar.
Harun-tutiya, HIND., Ophelia.
Hasalban-achsir, ARAB., Rosmarinus officinalis.
Hasan—Imam.
Hasani Syed, Descendants of Hasan, son of Ali.
Hasani Yusuf. See Diatomaceæ.
Hasan-us-Saba. See Alamut; Old Man.
Hasek. See Hud.
Hasha, ARAB., Thymus vulgaris.
Ha-sih-ni, MONGOL, Asafœtida.
Hasni, HIND., Cichorium intybus.
Hasn-ul-Hillaj. See Sufi.
Hasse luban, Husse-ul-jawi, PERS., Styrax, Benzoin.
Hasti kasaka, TEL., Elephantopus scaber.
Hastinapur. See Jumna.
Hat'h, HIND., Cubit.
Hathajooree, HIND., Cyclamen.
Hatial—Sir-kap.
Hatkar. See Dhangar.
Hatimul, HIND., Ophelia alata.
Hattian, Safed simal, HIND., Eriodendron anfractuosum.
Hauran. See Bedouin.
Havanga, MALEAL., Cassia lignea.
Hawk eagles, *sp.* of Limnaetus.
Hawks, the sub-family Accipitrinæ. See Birds.
Hay, Arthur, Marquess of Tweeddale. See Birds, 367.
Hazara. See Afghanistan.
Hazel, Corylus colurna, Hamamelideæ.
Haziz-Hindi, ARAB., Berberis aristata.
Head-hunting. See Borneo.
Heart-pea, Cardiospermum halicacabum.
Heather, Himalayan, Andromeda fastigiata.
Hebalsu, CAN., Artocarpus hirsutus.
Hecatæus of Miletus, B.C. 509–486, the first Greek who speaks of India by name.
Hedera racemosa, Heptapleurum racemosum.
Hedgehogs, *sp.* of Erinaceus. See Mammalia.
Hedychium coronarium. See Gandasuli.
Hedysarum alhagi, Alhagi maurorum.
Hedysarum lagenarium, Æschynomene aspera.
Hedysarum prostratum, Indigofera enneaphylla.
Hedysarum sennoides, Ormocarpum sennoides.
Hedysarum trifl., Desmodium triflorum.
Heen ambilla gas, SINGH., Antidesma alexiteria.
Heen-tambala. SINGH., Ehretia buxifolia.
Heggin, CAN., Mus bandicota.
Heh-fu-tszi, Tsin-hiung, CHIN., Aconitum variegatum.
Helbeth, ARAB., Fenugreek seed.
Heliadæ of India. Hindustan, 80; Rama; Solar Race.
Helianthemum. See Cistaceæ.
Helianthus oleifer, Guizotia oleifera.
Helianthus tuberosus, Jerusalem artichokes.
Heliconidæ. See Insects.
Helicteres isora, Isora corylifolia.
Helij-i-Kabuli, ARAB., Terminalia chebula, Myrobalan.
Heliocles. See Bactria, 222.
Heliocopis cupido. See Insects.
Heliopolis. See Baalbec; Sun-worship.
Heliopsis platyglossa, Guizotia oleifera.
Heliothis armigera. See Insects.
Heliotrope. See Bloodstone.
Heliotropium Indicum, Tiaridium Indicum.
Helmand. See Aryan, 176.
Helmet crab, Limulus longispina.
Hemba, ARAB. See Oxalidaceæ.
Hemidactylus coctœi. See Reptiles.
Hemigymna Macleodii, Cordia Macleodii.
Hemileia vastatrix. See Coffee Planting, 775; Insects.
Hemiramphus. See Fishes, 1116.
Hemitelia horrida, Tree-fern.
Hemitragus. See Bovidæ, 425.
Hemlock, Conium maculatum.
Hemp, Cannabis sativa, Crotalaria juncea.
Hemroo. See Clothing.
Hendel kakora, BENG., Rhizophora gymnorhiza.
Hendon. See Raffles.
Hengar. See Palitana.
Heng-chung-ha-po, CHIN., China grass or Rhea.
Henna, Mhendi, HIND., Lawsonia inermis.
Henna gorivi, CAN., Ixora parviflora.
Henna-ul-koresh, ARAB., Lichen rotundatus.
Hera. See Hora.
Hercules. See Baldeo.
Herear du, a deity of the Korambar.
Herenso, SANSK., Pisum sativum.
Hermæus. See Bactria, 222.
Hermann. See Botany.
Hermit crabs, *sp.* of Paguridæ.
Hermon—Mount.
Herodias. See Egret.
Herons, *sp.* of Ardea.
Herpestes griseus. See Viverridæ; Ichneumon.
Herpeton, a genus of harmless snakes. See Reptiles.
Hessonite, or Kaneel stone, Cinnamon stone. See Garnet.
Heterophragma Roxburghii, Spathodea Roxburghii.
Hevea Benthamiana. See Caoutchouc.
Hewar, MAHR., Acacia leucophlœa.
Hia-hi, SANDWICH ISLANDS, Santalum album.
Hiang-ch'-un, Chun-pi, CHIN., Cedrela odorata.
Hiang-fu-tze, CHIN., Cyperus esculentus.
Hiang-kwang, CHIN., Mushroom.
Hiang-ma, CHIN., Hibiscus cannabinus.
Hiang-tsai, CHIN., Parsley.
Hiatilla. See Hun.
Hibbah namah, a deed of gift.
Hibbuk, also Hibbuk nana, ARAB., Mint.
Hibiscus populneus, Thespesia populnea.
Hibiscus similis, Paritium tiliaceum.
Hibiscus subdariffa, Roselle.
Hibiscus Zeylanicus, Pavonia Zeylanica.
Hi-el, the winter solstice.
Hierodulæ of Babylon, Dancing girls.
Hieroglyphics. See Cuneiform.
Hijili badam, BENG., Anacardium occidentale, also Aleurites triloba.
Hijili mehndi, Eugenia bracteata.
Hijjul, HIND., BENG., Barringtonia acutangula.
Hik-gass, SINGH., Odina wodier.
Hillooya, BENG., Asparagus officinalis.
Hilsa fish, Clupea palasah.
Hiltit, Anjadan, ARAB., Ferula asafœtida.
Himapraya or Himavan, the Snowy Mountains.
Himavat. See Parvati.
Himis, Humuz, ARAB., Cicer arietinum.
Himyar, ARAB., Red—Homaritæ.
Hin-bin-komba, SINGH., Andrographis paniculata.
Hindano, SIND., Citrullus cucurbita.
Hindhi. See Afghanistan, 30.
Hinduba, HIND., Cichorium intibus.
Hindu Kush. See Central Asia; Imaus.
Hindustan, 80—Indore.
Hindwana, HIND., also Tarbuz, the Water-melon, Citrullus cucurbita.
Hineredura, SINGH., Anethum sowa.
Hing, HIND., Ferula asafœtida, Asafœtida.
Hingam, ARAB., HIND., Time, Season; hence Hingami, temporary.
Hingan bet, Hingot, HIND., Balanites Ægyptiaca.
Hingda, also Durdar, HIND., Cinabar.
Hing-gach, BENG., Asafœtida plant.
Hinghudi, SANSK., Terminalia catappa.
Hinglaj. See Kapadi.
Hingoolee, BENG., Solanum melongena.
Hin-gotu kola, SINGH., Hydrocotyle Asiatica.
Hingul, SINGH., Amoora rohituka.
Hingula Devi. See Oritæ.
Hinne koreish, ARAB., Lichen rotundatus.
Hin-pus-wael, SINGH., Entada purseetha.
Hintal, BENG., Phœnix paludosa.
Hippion hyssopifolium, Cicendia hyssopifolia.
Hippobosca equina, Horse-fly.
Hippocampus. See Fishes, 1116; Syngnathidæ.
Hippoglossus olivaceus, Japanese halibut.
Hippomane biglandulosa of Borneo, yields caoutchouc.
Hippopotamus amphibius. See Suidæ.
Hippopus maculatus, Tridacna gigas.

Hippostratus. See Bactria, 222.
Hippotigris. See Equidæ.
Hiptage madablota, Gærtnera racemosa.
Hirabol, SANSK., Balsamodendron myrrha.
Hira dakhun, Pterocarpus draco, Calamus draco, Dragon's blood.
Hirak or Hirek, Diospyros montana.
Hiranyabahu. See Chandragupta.
Hira-tutia, HIND., Green copperas.
Hircus segagrus, Capra megaceros.
Hirda, DUKH., also Huldah, Terminalia chebula.
Hirek, Pasendu, PANJ., Diospyros montana.
Hirneola. See Fungus.
Hirn-padi, HIND., Convolvulus arvensis.
Hirsuf, BENG., Artichoke, Cynara scolymus.
Hiru, HIND., Cassia tora.
Hirumba, a name of Kachar.
Hissar. See Walking Fishes.
Hitopadesa, Kalila-wa-Damna, Literature.
Hittites—Literature.
Hiu, Yu, CHIN., Citrus decumana.
Hiueh-kieh, Chu-kieh, CHIN., Dragon's blood.
Hiueh-yu, CHIN. (the tallow), Stillingia sebifera.
Hiuen-hu-soh, CHIN., Corydalis ambigua.
Hiuen-tiau-tsze, CHIN., Rubus, *sp.*
Hiung-nu. See Hun; Turk.
Hiun-luh-hiang, CHIN., Olibanum.
Hla, TIB., Musk deer. The finest musk comes from Khoten.
H'lwa-bo, BURM., Eriolæna tiliifolia.
H'man, BURM., Feronia elephantum.
H'man then, BURM., Curcuma Roscoeana.
H'mo, BURM., Agaric.
Hnan, BURM., Nauclea cordifolia.
Hnan bai, Na-bhay, BURM., Odina wodier.
Hnan-ma, BURM., Sesamum Indicum.
Ho—Kol, Mundah, Sun-worship.
Hoa or Hea. See Chaldæa, 642.
Hobby, Hypotriorchis subbuteo and H. severus. See Falconidæ; Laghar.
Hodgson, Bryan. See Birds, 367.
Hodhad, Father of Balkees.
Hog-badger, Arctonyx collaris.
Hog-deer, Hyelaphus porcinus.
Hog-weed, Boerhaavia erecta.
Hoh-huh, CHIN., Quercus, *sp.*
Hoisala. See Architecture; Sculptures.
Hoisala Bellala. See Architecture, 146; Sculptures.
Holcus spicatus, Penicillaria spicata.
Holgeri, MAHR., Holigarna longifolia.
Holkar. See Feudatory.
Holly, Ilex.
Hollyhock, ENG., Althæa rosea.
Holoptelæa integrifolia, Ulmus integrifolia.
Holothuria physalis, Portuguese man-of-war.
Holothuriadæ, Trepang.
Homa. See Soma.
Homalopsidæ. See Reptiles.
Hondapara, CEYL., Dillenia speciosa.
Honey buzzard, Pernis cristata.
Honey guides, Indicator xanthonotus.
Honey-suckers, *sp.* of Æthopyga, Leptocoma, Arachnechthra, Sunbird.
Honeysuckle, Quisqualis Indica.
Hong-lane, CHIN., Coptis tecta.
Honglu, KASH., Cervus Wallichii.
Honnay, CAN., Pterocarpus santalinus.
Honover. See Parsee.
Hor, HIND., Terminalia chebula.
Hora-gaha, SINGH., Dipterocarpus turbinatus.
Hori-kowan, MAHR., Alstonia scholaris.
Horingi maram, also Horingi tanga maram, TAM., Soap-nut trees.
Horitæ. See Ast'hola; Oritæ.
Hormara, Sea-coast district of Baluchistan.
Hormazd. See Parsee.
Hornbills. See Birds; Bucerotidæ.
Hornet. See Insects; Vespidæ; Wasps.
Horse. See Equidæ.
Horu of Surat, Urtica heterophylla.
Ho-san, CHIN., Rhubarb.
Ho-tan-t'u, CHIN., Commelyna Bengalensis.
Ho-t'-au, Sien-kwo, CHIN., Peach.
Hottentot in Africa estimated at 50,000.
Hottonia serrata, Hydrilla verticillata.
Hot wind, Phagwa.
Houbara. See Bustard.
Howa, PERS., Atmospheric air.
How Tsang, Ulterior Tibet.
Hoy-shun, CHIN., Holothuria.
Hsai-than-barah, BURM., Gelonium lanceolatum.
H'sat-ta-phu, BURM., Pandanus odoratissimus.
H'say-dan-shwaywa, BURM., Arsenic.
H'seik-ba-lu, BURM., Nyctanthes arbor-tristis.
H'seik-kyi, BURM., Sapindus rubiginosus.
H'sen, H'sen-way, BURM., Ochna squarrosa.
H'soo-kyan-bo, BURM., Cæsalpinia sepiaria.
H'toin, BURM., Nauclea parviflora.
H'ten-roo, HIND., Casuarina muricata.
H'toung h'pyu, BURM., Calcareous spar.
Hub, ARAB., a fruit.
Hubbuk, ARAB., Mentha sativa.
Hubbuk-ul-bukir, ARAB., Anthemis nobilis.
Hub-ul-ban (seeds), ARAB., Horseradish tree.
Hub-ul-ghar, ARAB., Laurel berry.
Hub-ul-huber, ARAB., Juniper berries.
Hub-ul-kaking, ARAB., Puneeria coagulans.
Hub-ul-mul, ARAB., Ophelia chirata.
Hub-ul-mushk, ARAB., Abelmoschus moschatus.
Hub-us-Soudan, ARAB., Cassia absus.
Hub-usufurjul, ARAB., Cydonia vulgaris.
Hub-u-zangi, ARAB., Ipomœa turpethum.
Huing-yuen, CHIN., Sarcodactylis odorata.
Hu-kwa, Hwang-kwa, CHIN., Cucumis melo.
Hulang-hik-gas, SINGH., Chickrassia tabularis.
Hulan mara, CAN., Albizzia stipulata.
Hulashing, KASH., Rhus buckiamela.
Hullah, HIND., also Hurla, Huldah or Zungeehur, Terminalia chebula.
Hulsi, BENG., Ægiceras fragrans.
Hu-lu, CHIN., Lagenaria vulgaris.
Hulug, Butairi, PANJ., Rhus semialata.
Huluvi of Neilgherries, Eurya Japonica.
Hulva mahi, DUKH., Pomphret.
Hum, Hamu, of Kangra, Fraxinus floribunda.
Hum, MAHR., Guatteria cerasoides.
Hu-ma-tsze, CHIN., Flax seed.
Humayun namah. See Panchatantra.
Hummatu, MALEAL., Thorn apple, Datura alba.
Humpi. See Bellary.
Humula, BENG., Kaempfera galanga.
Hun. See Hiatilla; Hiung Nu; Ili.
Hun-des or Gnari Khorsum, occupied by Hunia.
Hung-chi-tsze, CHIN., Gardenia rubra.
Hung-kiao. Tibet; Tsong-kha-ba.
Hungrung. See Spiti.
Hung-tau, CHIN., Abrus precatorius.
Hung-tau-k'au, CHIN., Alpinia galanga.
Hunni, HIND., Quercus annulata.
Hunsraj, HIND., Adiantum capillus veneris, A. lunulatum.
Hu-peh, CHIN., Amber.
Hur! the battle shout of the Rajput.
Hur or Hura, HIND., Terminalia chebula, Myrobalan.
Hura-kandu, SINGH., Kurrimia Zeylanica.
Hurfareori, HIND., Cicca disticha.
Hurhurya, BENG., HIND., Polanisia, Achyranthes aspera.
Huri kankra, BENG., Erythrina ovalifolia.
Hurna, Mus, HIND., Gerbillus Indicus.
Hurriphal, Nubi, BENG., Cicca disticha.
Hursing, Harsinghar, CAN., Nyctanthes arbor-tristis.
Huru, ASSAM., Urtica heterophylla.
Huruf-i-tahji, the Arabic alphabet, any alphabet.
Huruya? Sapium Indicum.
Hussain. See Imam.
Husn Jaber. See Jaber.
Husse luban, PERS., Styrax benzoin.
Husti. See Cush.
Hu-tau, CHIN., Phaseolus, *sp.*; Heht-au, Juglans regia.
Huyer, BENG., Cocculus villosus.
Hwah-shih, Hwah-shwui, CHIN., Agalmatolite, Steatite.
Hwai-hisng, CHIN., Illicium anisatum.
Hwai-hwa-tsing, CHIN., Cathartocarpus fistula.
Hwang-chi-tsze, CHIN., Gardenia radicans.
Hwang-hwa, CHIN., Saffron.
Hwang-hwa-tsai, CHIN., Lily flowers.
Hwang-kia, CHIN., Solanum Indicum.
Hwang-kin-shih, CHIN., Realgar.
Hwang-kung. See Solfatara.
Hwang-liang, CHIN., Rhubarb.
Hwang-lien, CHIN., Andrographis paniculata.
Hwang-ma, CHIN., Hemp.
Hwang-mei, CHIN., Apricot.
Hwang-peh, CHIN., Pterocarpus flavus.
Hwang-ta-tau, CHIN., Soja hispida.
Hwang-yang-muh, CHIN., Buxus sempervirens.
Hwa-tsiau, CHIN., Xanthoxylon alatum.
Hyalonema Sieboldii, Venus flower-basket.
Hy-chy, CHIN., Agar-agar.

Hydrophidæ. See Reptiles.
Hydrophylax maritima. See Sand-binding Plants.
Hydrosaurus salvator. See Reptiles.
Hydrus schistosus. See Reptiles.
Hyelaphus porcinus, Hog-deer. See Cervidæ.
Hy hy, CHIN., Agar-agar.
Hyi-bin, Hsee, BURM., Zizyphus jujuba.
Hylesinus. See Insects.
Hylobates. See Hoolock.
Hymenoptera. See Insects.
Hypericum carneum, Ancistrolobus carneus.
Hypnale nepa, Reptiles.
Hyrax Syriacus, the Coney of Leviticus xi. 5, Deuteronomy xiv. 7.
Hyrcania—Jin, Teheran.

I

I', CHIN., Whales.
Iabadius. See Java.
Iayapala, CAN., Croton seed.
Ibadiyah. See Imam.
Ibex, Hemitragus hylocrius, also Capra Sibirica.
Ibharan-kusha, BENG., Andropogon iwarancusa.
Ibidorhyncus, a curlew. See Scolopacidæ.
Ibis, Tantalus leucocephalus, Anastomus oscitans; *sp.* of Threskiornis, Geronticus, and Falcinellus.
Ibn Haukil. See Ashkal-ul-Balad.
Ibn Kurdadba. See Hindu, 74.
Ibrahim Qutub Shah, one of the Qutub Shahi dynasty of kings, who ruled at Golconda near Hyderabad A.D. 1557. He is buried there, and a large cupola covers the tomb.
Ibu-changke, MALAY, Clove.
Ichi maram? TAM., Ficus t'siela.
Ichneumon. See Herpestes.
Ichthyoxenus. See Crustacea.
Icica altissima of Guiana, Cedar.
Iconoclast, a term often applied to Mahmūd of Ghazni, from his destruction of Hindu idols.
Ichthyœtus bicolor, Poliœstus ichthyœtus.
Idaan. See Borneo, 419.
Idakai, Idangai, Idam, TAM., Left-hand caste.
Idayar. See Khone.
Iddali kallu, TEL., Manganese.
Iddu mulle, TAM. of Ceylon, Pyrularia Wallichiana.
Ides. See Amavasya.
Idols. See Carving.
Idrisi, the Takhallus of Abu Abd-Ullah. See Al Idrisi.
Idylia. See Phosphorescence.
Ig'hir, Waj, Ikaroon, ARAB., Acorus calamus.
Ignatia amara, Strychnos sancti Ignatii.
Ignatius Loyola, Jesuit.
Iguana. See Bish-Kopra.
I-jen. See Colquhoun.
Ijjaman. See Gram.
Ijjul, HIND., Barringtonia acutangula.
Ijoeir, EGYPT., Hordeum hexastichyon.
Iju, Siji, MALAY, Gumuti.
Ikan layer, Histiophorus, Sailor-fish.
Ikan leda, MALAY, Pluronectes solea.
Ikan surdudu, MALAY, Arius arius.
Ikara, BENG., Mus bandicota.
Iker, TIB., Felis uncia.
Ikh, SANSK., Sugar-cane.
Iklaki, PANJ., a square scarf of Multar.
Ikl-bir, HIND., Datisca cannabina.
Ikra, RUS., Caviare.
Ikshoo, BENG., Sugar-cane, Saccharum cucu'lata.
Ikshugandha, SANSK.; Ikshura, HIND., Asteracantha longifolia.
Il. See Chaldæa, 642.
I', or Ra, i. 642.
Ila. See Ikshwa'ou.
Ilachi, HIND., Alpinia nutans, also Elettaria cardamomum.
Ila-mitcham, TAM., Andropogon muricatus.
Ilavam, TAM., Bombax Malabaricum.
Ilchi. See Khoten.
Ilderim. See Othman.
Ili. See Hun.
Iliazai. See Afghanistan.
Iliyat. See Persia.
Illanun. See Boats, 309.
Illecebrum lanatum, Ærua lanata.
Illecebrum sessile, Alternanthera sessilis.
Illecebrum verticulatum, Portulaca quadrifida.
Illepi, TAM., Bassia longifolia.
Illi. See Rice Beer.
Illicium anisatum, Anise-star.
Illinda, TEL., Diospyros chloroxylon.
Illipi, TAM., Bassia latifolia.
Illukatte, TEL., Ichnocarpus frutescens.
Illumbilli maram, TAM., Ferreola buxifolia.
Ilm-i-Nabatāt, PERS., Botany.
Ilm-i-Shūna, PERS., Divination.
Ilocano. See Philippines.
Imam. See Ismail; Pesh-Imam.
Imambarah. See Palibothra.
Imam Muhammad Touky, Imam Musa Kassim, and Imam Raza. See Kazameen.
Imar, HIND., Carpinus viminea, Hornbeam.
Imarjal, HIND., Iris pseudacorus.
Imaun, Mawar-un-Nahr.
Imaus. See Mount Imaus.
Imbir, HIND., Ulmus campestris.
Imbo, JAV., Azadirachta Indica.
Imboolgas, SINGH., Eriodendron anfractuosum.
Imla, HIND., the Amni of the Salt Range, Zizyphus vulgaris, or common jujube, also PERS., the Emblic myrobalan.
Imli, HIND., Tamarindus Indica.
Imli Khorasani, HIND., Adansonia digitata, also Thespesia populnea.
Imperata spontanea, Saccharum spontaneum.
Imppio, a river of the Panjab; its sands yield gold. See Panjab.
Imrtan. See Afghan; Kafir.
Inachus scorpio—Egeria.
Inakarto Pati, king of Janggolo of the 14th century, is said to have invented the kris.
Inam lands of the Madras Presidency extend to 3,961,394 acres, and the assessment at Rs. 54,89,928.
Inam of Bonoa is the Rhea, China grass.
Incarnations. See Karund.
Incarvillea emodi, Amphicome arguta.
Incarvillea parasitica, Æschynanthus grandiflorus.
Incense, Koondur, Zuchir, HIND., Olibanum, Gugal.
Inchi, MALAY, a respectable affix to names, as Inchi Dawud, Mr. David.
Indak, HIND. of Salt Range, Gymaion vestitum, also Cordia vestita.
Indarba, HIND., Celtis Caucasica.
Indarjao, PANJ., Holarrhena antidysenterica.
Indarume, DUKH., Dragon's blood.
Indian almond, Terminalia catappa.
Indian berry, Cocculus Indicus.
Indian birthwort, Aristolochia Indica.
Indian blackwood Dalbergia, *sp.*
Indian blistering-fly, Mylabris, *sp.*
Indian buckbean, Villarsia Indica.
Indian bustard, Houbara Macqueenii.
Indian copal tree, Valeria Indica.
Indian corn, Zea mays. Maize.
Indian cress, Nasturtium.
Indian empire. See British India.
Indian fig order, the Cactaceæ, a group of succulent shrubs, variable in form, angular and flattened, and frequently spinous, bearing often large and showy flowers; the Indian fig, Opuntia Ficus Indica, has been naturalized in Southern Europe.
Indian fig tree, Ficus Indica.
Indian fox, Vulpes Bengalensis.
Indian gazelle, Gazella Bennettii.
Indian gum anime, Vateria Indica.
Indian gutta tree, Isonandra acuminata.
Indian ink, a black pigment used for water-colour painting, China ink.
Indian jerboa rat, Gerbillus Indicus.
Indian kino, Dried juice of Butea frondosa.
Indian Maya. See Rama.
Indian mole rat, Nesokia Indica.
Indian myrrh, in Europe the commercial name of a substance surmised to be produced from a species of Amyris. It is supposed to be the googul of the bazars.
Indian sarsaparilla, Hemidesmus Indicus.
Indian shot, Canna Indica.
Indian tamarisk, Tamarix Indica.
Indian tea, Basella alba.
Indian tobacco, Lobelia inflata.
Indian turnsol, Crozophora plicata, also Tiaridium Indicum.
Indian valerian, Valeria jatamansi.
Indian wormwood, Artemisia Indica.
Indian yellow—Hardwari Peori.
Indicatorinæ, a sub-family of birds of the family Picidæ. See Birds.
Indicopleustes. See Cosmas.
Indivara, or Nalla kalava, TEL., Nymphœa stellata—'The blue lotus.'
Indo-Atlantics, Iranian races.
Indong mutiara, MALAY, Mother-of-Pearl.
Indore—Hindustan, 80.
Indo-vansa. See Chandravansa.
Indragiri, or Kuantan. See Johore.
Indrain, HIND., Citrullus colocynthis.
Indrajow, HIND., Conessi seed, Wrightia antidysenterica.
Indraprasthra. See Jumna; Pat.
Indra-subha. See Cave Temples, 611; Jain.
Indratige, TEL., Thunbergia fragrans.
Indravadu, TEL., a toddy-drawer, employed also as palanquin-bearer.

Indrawan, DUKH., Citrullus colocynthis.
Indrayava, HIND., Wrightia antidysenterica.
Indri, HIND., Quercus annulata.
Indu. See Asi; Aswa; Ay; Lunar Race; Yadu.
Induga, BENG., Strychnos potatorum.
Indupu chettu, also Chillu chettu, TEL., Strychnos potatorum.
Indur, BENG., Mus, *sp.*
Indurjuo-i-talkh, HIND., or bitter Indurjao, are the seeds of Holarrhena pubescens, 'Roora,' and H. antidysenterica, the same size and colour, furrowed deeply at one side, very bitter; Indurjuo-i-shereen, mild indurjuo, seeds of Wrightia antidysenterica, about ½ inch long, brown, nearly tasteless.
Indus. See Boats; Canals; Rivers.
Ing, BURM., Lakes.
Inga dulcis, Pithecolobium dulce.
Ingani or Injni; HIND., Oxide of manganese.
Inga xylocarpa, Xylia dolabriformis.
Inghilikam, TAM., Inghulam, SANSK., Cinnabar.
Ingini gaha, also Ingivi, SINGH., Strychnos potatorum.
Ingomaas of Manilla, Pachyrhizus angulatus.
Ingrach, also Yang, also Tash of Kangra, Fragaria vesca.
Ingromaniyus. See Ahriman; Aryans.
Ingu, MALAY, Asafœtida.
Ingudi, SANSK., Terminalia catappa.
Inguva, Hingu-patri, TEL., Ferula asafœtida.
Initiation, of Brahmans, i. 434; of Sikhs. See Pahal.
Injani, HIND., Cymbopogon iwarancusa.
Ink, a Japanese long measure, nearly 75 inches.
Inkitriun, ARAB., Amber.
Insect powder, Chrysanthemum roseum.
Insects. See Ants; Argas Persicus; Beetles; Butterfly.
Insra, HIND., Rubus biflorus.
Intakal, ARAB., Transfer, Passage from life to death, Death.
Intalas, Kimxa, MALAY, Brocade.
Intan, MALAY, Diamond.
Intha, MALEAL., Phœnix farinifera.
Inub, ARAB., Vitis vinifera. The grape.
Inundation. See Floods.
Inuus silenus. See Papioninæ.
Inyana. See Kabir Panthi; Vaishnava.
In-yong, CHIN., Mandarin teal.
Inzar, HIND., Ficus caricoides, F. virgata.
Inzarra, HIND., Grewia betulæfolia, G. Rothii.
Ionia. See Javan.
Ipar, HIND., Thymus vulgaris.
Ipi, CAN., Bassia longifolia.
Ipoh, MALAY, the upas tree.
Ipomœa batatas, Batatas edulis, Sweet potato.
Ipomœa bona nox, Calonyction speciosum.
Ipomœa bracteata, Argyreia bracteata.
Ipomœa nil, Pharbitis nil.
Ipomœa quamoclit, Quamoclit.
Ipomœa speciosa, Argyreia speciosa.
Ippu, the Antiaris toxicaria tree of Borneo, from which is obtained the poison with which the Idaan tribe poison their darts; its effects are similar to those of the Llana and Ticiuma of S. America.
Ira, or Sura, in Hindu cosmogony, the sea of intoxicating liquor which surrounds the Cusadwipa.
Irak, also Miswak, PERS., Salvadora Indica.
Irakkadan, TAM., the Rakshasa of Hindu mythology.
Irámbu, TAM. See Maleal; Pali.
Iranian family—Languages.
Iranian race. See Central Asia.
Irani-korte of Mahadeva Patnam. See Jews.
Iraotes. See Saraswati.
Irawadi, Rivers.
Ir-elli-palai, TAM., Alstonia scholaris.
Iriartea exorhiza. See Palms.
Iri babool, MAHR., Vachellia farnesiana.
Iridæa. See Sea-weeds.
Ir-illay-palai, Pala, TAM., Alstonia scholaris.
Irkamula, SANS., Aristolochia Indica.
Irkuli, TAM., Elæodendron Roxburghii.
Irmpanna, CAN., Caryota urens.
Iron-oxide. See Dyes.
Iron-wood, Inga bigemina, Inga xylocarpa, Mesua Roxburghii, Xylia dolabriformis.
Irool, TAM., Xylia dolabriformis.
Irr, HIND., Chenopodium album.
Iru-bogum, MALABAR, Hopea parviflora.
Irugudu chettu, TEL., Blackwood, Dalbergia latifolia.
Irular. See Dravidian.
Irul maram, TAM., Mesua ferrea.
Irumleli, TAM., Maba buxifolia.
Irun, HIND., Volkameria fragrans.
Isafghol, HIND., Plantago amplexicaulis, also P. ispaghula and P. major.
Isaka dasari kura, TEL., Giseckia pharnaceoides.
Isakarasi manu, TEL., Sapindus rubiginosus.
Isapabora gaddi, also Chippa bora gaddi, TEL., Panicum corymbosum.
Isara, TEL., Aristolochia Indica.
Isarmel, also Israbel, Ishurmool, HIND., Aristolochia Indica.
Isatis. See Dyes.
Isatis tinctoria, Woad. See Dyes.
Isband, HIND., Seeds of Corchorus olitorius, Jute; also C. trilocularis.
Isband lahouri, HIND., Paganum harmala.
Isfand, PERS., Rue, Ruta graveolens.
Ishk-pecha, HIND., Pharbitis nil; the name means love's ringlet.
Ishrak, ARAB., Prayer at sunrise.
Ishta, SANSK., from Ish, to desire; Ishta devata, the chosen or elected deity; the deity whom a Hindu elects to worship; a personal or tutelary deity.
Ishtar. See Chaldæa, 643; Sun-worship.
Ishurmul, HIND., Aristolochia Indica.
Isiapangam, also Vuttunghy, TAM., Cæsalpinia sappan, Sappan wood.
Isinglass. See Air-bladder; Capoeta macrolepidata; Polynemus; Swim.
Ism, HIND., PERS., Charms, Zakat.
Ismad, Kohl, ARAB., Antimony, Sulphuret of antimony.
Ismaili. See Karmati; Old Man.
Isodon plectranthoides, Plectranthus rugosus.
Isonandra acuminata, Pauchontoe.
Isopodes. See Crustacea.
Isora corylifolia, Helicteres isora.
Issyk-kul. See Lakes.
Istaflin jazr, ARAB., the Carrot, Daucus carota.
Istakhr. See Persepolis.
Iswara chettu, TEL., Aristolochia Indica.
Iswara mamadi, TEL., Xanthochymus pictorius.
Ita chettu, TEL., Phœnix sylvestris.
Itch insect, Sarcoptus, *sp.*
Itch plant. See Kaukaro.
Ivory nut, Phytelephas macrocarpa.
Iwaran-kusha, BENG., Andropogon iwaranchusa.
Ixora paniculata, Pavetta Indica.
Ixos. See Birds; Bulbul.
Iyu, also Yu, MALAY, Sharks' fins.
Izaraki? PERS., Strychnos nux vomica.
Izar-band. See Clothing, 748.
Izashne, Izeshne, or Yassen, a religious book of the Zoroastrians.
Izhar, ARAB., Representation.
Izkhar, HIND., Andropogon iwarancusa; Gul-i-izkhar, the flower used in flavouring spirits.

J

JADA, SANSK., Hibiscus rosa Sinensis.
Jabat, MALAY, Castor, Civet.
Jabl-Ilal, a name of Mount Arafat.
Jabl-us-Shaikh. See Mount.
Jacana, Metopodius Indicus, Hydrophasianus chirurgus, Parra.
Jack, William. See Botany.
Jackanachari, Somnathpur.
Jack-fruit tree, ENG., Artocarpus integrifolius.
Jack snipe, Gallinago gallinula. See Scolopacidæ.
Jadikaia, TAM., TEL., Myristica moschata.
Jadrun. See Afghanistan.
Jadwar-khatai, PERS., Curcuma zedoaria.
Jafar Sadiq. See Ismail.
Jafar Sharif. See Games.
Jafferi gundi, DUKH., Gomphrena globosa.
Jafra chettu, TEL., Bixa orellana.
Jaganath Subha. See Jain; Puri.
Jagari palm, Caryota urens.
Jagera Abyssinica, Guizotia oleifera.
Jageria calendulacea, Wedelia calendulacea.
Jaggar, Laghar, HIND., Falco jugger.
Jagguri, CAN., Antiaris innoxia.
Jahannam, TURK., Hell.
Jahez, ARAB., a trousseau.
Jaihun, a name of the Oxus.
Jaina caves. See Architecture; Cave Temples, 144–45.
Jaintia Hills, i. 449, Khassya Hills.
Jaipal. See Peshawur.
Jaiphul, HIND., Nutmeg.
Jaiswal. See Oswal.
Jaiwantry, Jaiputri, HIND., Mace.
Jaji kain, TEL., Nutmeg.
Jajpur. See Architecture, 147.
Jaka mara, Halasu, CAN., Artocarpus integrifolius.
Jakhur. See Deserts, 920.
Jakun. See Binua.
Jakun. See Gunong; Malay Peninsula.
Jala, PANJ., Hydrilla verticillata.
Jala. See Ordeal.
Jalaga, TEL., Leeches.
Jalal-ud-Din. See Akbar.
Jalal-ud-Din Rumi. See Sufi.
Jalasayah? SANSK., Andropogon muricatus.

Jalasai. See Afghanistan.
Jaldaru, SUTLEJ, Prunus Armeniaca.
Jalenus. See Galen.
Jalidar, RAVI, SUTLEJ, Rhamneæ.
Jali-nim, SANSK., Herpestris monniera.
Jalli, CAN., Acacia farnesiana.
Jal-pipi, BENG., Jacana.
Jam, DUKH., Psidium pomiferum, P. pyriferum.
Jamalgiri. See Cave Temples, 611.
Jamalgota, HIND., Croton tiglium.
Jamal-ud-Din. See Abd-ur-Razzaq.
Jamba, CAN., MAHR., Inga xylocarpa.
Jambi, Panang, JAV., MAL., Betel nut.
Jambo, BENG., Jambosa aquea.
Jambo, Iring of Sumatra, Anacardium occidentale.
Jambool, BOM., Eugenia jambolana.
Jamboola, SINGH., Citrus decumana.
Jambu biji also Jambu klampuk, MALAY, Guava tree.
Jambu-monat, MALAY, Anacardium occidentale.
Jambya, HIND., a form of dagger.
Jamcana, TEL., Carpets.
James and Mary. See Hugli.
Jami. See Yusuf.
Jamir of Ravi, Ficus carica, F. virgata.
Jam-johara, HIND., Ortolan.
Jam kalam, TAM., Carpets.
Jammu gaddi, TEL., Typha elephantina.
Jamoa, PANJ., Elæodendron Roxburghii.
Jamshid. See Takht-i-Jamshid.
Jamshidi. See Iranian Races.
Jamu. See Feudatory.
Jamun, HIND., Eugenia jambolana, Calyptranthes caryophyllifolia.
Jamuna, PANJ., Cerasus cornuta.
Jamuna. See Rivers.
Janaka. See Sita.
Janakua, MALEAL., Costus speciosus.
Janapa, Shanapa-nar, TAM., Sunn.
Jana palascru, TEL., Antidesma pubescens.
Janavi, SANSK., Zonar, Pavita, Poita.
Jand, HIND., Indigofera arborea.
Janeo, HIND., Zonar.
Jangar. See Boats, 393.
Jangli akrot, HIND., Aleurites triloba.
Jangli ananas, Jangli Kanwar, HIND., Agave Americana.
Jangli badam, Sterculia fœtida, Canarium commune.
Jangli bakra, Cervulus aureus, also Tetraceros quadricornis.
Jangli-bhendi, Erinocarpus Nimmonii.
Jangli billi, HIND., Felis chaus.
Jangli bulgar, KASH., Boletus igniarius.
Jangli kaboot, HIND., Bustard.
Jangli khulga, Gavæus gaurus.
Jangli kuta, Cuon rutilans.
Jangli munghi, Ormocárpum sennoides.
Jangli-pat, Corchorus fascicularis.
Jangli-powar, Cassia obtusifolia.
Jangli rai am, Tetranthera monopetala.
Jan-i-Adam, PERS., Ajuga bracteosa.
Janipha manihot, Manihot utilissima.
Janji, BENG., Utricularia fasciculata.
Jantri, HIND., Almanac. See Astronomy, 195.
Janwez, MAHR., Zonar.
Jao, HIND., PERS., Barley, Hordeum, *sp.*
Jap'hara, TEL., Rottlera laccifera.
Jarak, MALAY, Ricinus communis.
Jar-beri, HIND., Zizyphus nummularia.
Jardi, HIM., Rusa Aristotelis.
Jarnang, MALAY, Dragon's blood.
Jarool, HIND., Lagerstrœmia reginæ.
Jarukiegi, MALAY, Orange; Jaruk nipis, Lime.
Jaru teka, MALEAL., Clerodendron serratum.
Jashpur. See Oraon.
Jassoondi of Konkan, Jonesia asoka.
Jasun, HIND., Hibiscus rosa Sinensis.
Jat. See Afghanistan, 30; Caste; Kashmir.
Jatakas. See Josaphat.
Jateorrhiza calumba, Calumba root.
Jati, HIND., Justicia ecbolium.
Jati. See Oswal.
Jatropha curcas. See Dyes.
Jat widow. See Kurao.
Jauhar. See Johar.
Jau-iriśi, Kua maoo, TAM., Arrow-root.
Jau tsau, CHIN., Cornus officinalis.
Java. See Archipelago, 137; Architecture, 147.
Javad, DUKH., Civet.
Java Loka, SANSK., the sphere of the sons of Brahma. See Loka.
Jave, PUSHTU, Grislea tomentosa.
Jawan, PANJ., Alhagi maurorum.
Jawashir, ARAB., Opoponax.
Jaya Deva. See Hindus, 62.
Jayapala, CAN., Croton tiglium.
Jays, *sp.* of Garuliniæ and Dendrocittinæ.
Jazar, Istuflin, ARAB., Carrot.
Jedaa, a Bedouin tribe.
Jeebun, BENG., Sponia orientalis.
Jeengha, HIND., Prawn.
Jegura, TEL., Cluytia patula.
Jehr of Simla, Hemitragus jemlaicus.
Jei (Hi), PANJ., Avena fatua.
Jelabrimmi, SANSK., Herpestris monniera.
Jelas, a Bedouin tribe in Najd.
Jelinghi river. See Hugli.
Jemuju? MALAY, Anethum graveolens.
Jerboa rat, Gerbillus Indicus.
Jeriam kottam, MALEAL., Antidesma pubescens.
Jer-monal. See Pheasant.
Jerrow, HIND., Rusa Aristotelis, Sambur.
Jeru kat narigam, MALEAL., Limonia acidissima.
Jerusalem artichoke, Helianthus tuberosus.
Jerusalem thorn, Parkinsonia aculeata.
Jesso. See Japan.
Jetawana. See Pallonarua.
Jetimadh, Malathi, HIND., Glycyrrhiza, Liquorice.
Jettamansi chebur, GUJ., Spikenard.
Jewellery. See Arts; Bracelet, 427. Chandan-har and Chand-bina are articles of female jewellery.
Jews. See Josephus.
Jew's ear. Horneola.
Jew's mallow, Corchorus olitorius, Juto.
Jeypur. See Feudatory; Hindustan, 80; Hot Springs, 113; Kand'h.
Jeypur horses. Horse, 105.
Jeysulmir. See Desert.
Jhaki, PANJ., Fagopyrum esculentum.
Jhal, Pilu, HIND., Salvadora Persica.
Jhala. See Cutch; Feudatory.
Jhalawan, a district of Baluchistan.
Jhalawar. See Kattyawar.
Jhaloca, Monastery near Bhynsror.
Jhand, Khand, HIND., Prosopis spicigera.
Jhandiam, Zendiam, SANSK., Zonar.
Jhangh, PANJ., Hydrilla verticillata.
Jhangi, Thangoli, PANJ., Corylus colurna.
Jhao, Lai, Kachlei, PANJ., Tamarix dioica.
Jharal, HIND., Hemitragus jemlaicus.
Jhareja. See Kala-Patta; Kattyawar; Rajputs.
Jharia, people of Central Provinces.
Jhariah. See Coal, 752.
Jhar-ka-kuta, HIND., Paradoxurus.
Jhar-katchura, MAHR., Strychnos nux vomica.
Jharya. See Jharikari.
Jhau, Lasaj of Kangra, Artemisia.
Jheend. See Cis-Sutlej.
Jhenku indur, BENG., Gerbillus Indicus.
J'hong-nua, ARAKAN, Gavæus frontalis.
Jhil, HIND., Lakes.
Jhula, HIND., a bridge.
Jhula of Kanawar, Hemitragus jemlaicus.
Jhunjhunian-kari, HIND., Ervum hirsutum.
Jibilika chettu, TEL., Grewia Rothi.
Jiburai, TEL., Flying fox.
Jidi ghenzalo, TEL., Marking nut.
Jidi mamedi, TEL., Anacardium occidentale.
Jidu palung, BENG., Salicornia Indica.
Jigha, PERS., an aigrette of jewels on the turbands of nobles of India. It is worked on all the Kashmir shawls.
Jih-pen-lah, Japan wax.
Jijhotias. See Kanaujia.
Jillaka, SANSK., Amarantus tristis.
Jillakara, TEL., Fennel seed.
Jilledu, TEL., Calotropis gigantea.
Jilpai, HIND., Ixora parviflora.
Jimmudu, TEL., Cacalia coccinea.
Jimuta. See Vahana.
Jinas. See Jain.
Jintan, MALAY, Cumin seed.
Jin-tung. See Honeysuckle.
Jiraga, CAN., Cumin seed.
Jira-manis, MALAY, Aniseed.
Jiritch, ARAB., Gingelly oil.
Jirugu, TEL., Caryota urens.
Jiru kaneli, MALEAL., Cascaria esculenta.
Jiul. See Hyul.
Jivak pat, HIND., Aloe Indica.
Jiva praias-chittam. Hindus, 68.
Jiyal, Jeevula, SANSK., Odina wodier.
Jiya putra, HIND., Putranjiva Roxburghii.
Joannes Damascenus. See Barlaam; Damascenus; Josaphat.
Joasmi—Oman.
Job's tears, Coix lacryma.
Jodhpur. See Hindustan, 80; Solar Race.
Jodu palung, BENG., Salicornia Indica.
Joe-boe, BURM., Walsura piscidia.
Jofi, a liquor prepared from sugar-cane, among the Teita tribe of Eastern Africa.

Jogi—Mendicants.
Jogim. See Basava; Rori Barolli.
Jogin, TEL., Dancing Girls; Devadasa.
John of Capua, Panchatantra.
John Dory, the Fish, Zeus auratus.
Johore. See Archipelago, 141; Binua.
Joji Khel. See Afghanistan.
Jokati, TAM., Gomphia angustifolia.
Joki, a nomade Baluch tribe in the hills west of Tatta; their chief is termed the Jam.
Joktan. See Arabia, 125.
Jombi, JAV., Areca catechu.
Jong. See Junk.
Jonk, GUJ., HIND., Leeches.
Joojar'h. See Jugar.
Jordan valley. See Hot Springs, 111.
Joree, HIND. Bombyces; Insects.
Jors, ANGLO-PORT., Toys, Jewels; from Portuguese Jaya, a jewel, or French Jouets.
Josaphat. See Barlaam.
Josephus. See Jew.
Jotish—Joshi.
Jou, a barley-corn; in India, as in many other countries, the primary unit of measures of length.
Jou, Western section of Baluchistan.
Joundela, HIND., Æchmanthera gossypina.
Jouz-i-Hindi, ARAB., PERS., Cocos nucifera.
Jouz khusif, ARAB., Walnut.
Jouz-masil, ARAB., Datura alba.
Jouz-ul-fota, ARAB., Punceria coagulans.
Jouz-ul-kueh, ARAB., Randia.
Jouz-ul-teib, ARAB., Nutmeg.
Jovana amelpodi, MALEAL., Ophioxylon serpentinum.
Jovana arali, MALEAL., Nerium odorum.
Jovanna-pula toli, MALEAL., Crinum latifolium.
Jova pushpamu, TEL., Hibiscus rosa Sinensis.
Jowaki, a pass leading through the Afridi Hills to Kohat.
Jowang. See Kamrup.
Joyha. See Rajputs.
Juanga. See Puttua.
Jubar. See Kolita.
Jubbul. See Hill States.
Jubbulpur. See Central Provinces.
Juda-tel-olu, SINGH., Nymphæa pubescens.
Judgali or Jethgali, the language of Luz, almost similar to that of Sind. The name is evidently derived from that of the tribe.
Judi mara, MALEAL., Graptophyllum hortense.
Jugani-chukar, HIND., Gmelina arborea.
Juglans camirium, Aleurites triloba.
Juglans catappa, Terminalia catappa.
Jugut muduu, BENG., Gendarussa vulgaris.
Juhi, HIND., Jasminum.
Ju-hiang, T'au-ju, CHIN., Olibanum.
Juh-kwo, Yuh-kwo, also Juh-tau-k'au, CHIN., Nutmeg.
Jui pani, Jui pona, BENG., Rhinacanthus communis.
Jujuya doomoor, BENG., Ficus glomerata.
Jumna river, i. 450.
Jumnotri. Hot Springs, 111.
Jumpaloo, TAM. See Jewellery.
Jumpti. See Boats, 393.
Junagarh. See Bhownagar.
Jungle fowl. See Gallus; Phasianidæ; the red jungle fowl, Gallus ferrugineus. The jungle fowl is about the size of a bantam, and is probably the original of the domestic stock, though said to be incapable of being domesticated.
Jungle nail tree, Acacia tomentosa.
Jungle sheep, Cervulus aureus. See Cervidæ, also Tetraceros quadricornis.
Juniporus. See Coniferæ.
Juniperus excelsa, Chandan.
Juniperus Virginiana, J. Barbadensis, Bermudiana. See Cedar.
Junjum, TEL., the zonar or sacred thread of the Hindus.
Junk. See Boats, 399–400.
Juno Moneta of Romans, the goddess Lakshmi. See Cartaka.
Jupiter. See Indra.
Jurea or Jariya, one of the seven divisions of the Lodh tribe.
Jurjan. See Chorasmia.
Juspur. See Chutia Nagpur.
Jussiæa caryophyllæa, Ludwigia parviflora.
Justicia adhatoda, Adhatoda vasica.
Justicia echioides, Andrographis echioides.
Justicia gendarussa, Gendarussa vulgaris.
Justicia nasuta, Rhinacanthus communis.
Justicia paniculata, BURM., Andrographis paniculata.
Justicia picta, Caricature plant, Graptophyllum hortense.
Justicia procumbens, Rostellaria procumbens.
Justicia repens, Rungia repens.
Jut. See Deserts, 920.
Jut, a race in the Panjab, Sind, and N.W. India. See Geto; Jat.
Juta, HIND., False; Juta-kanchura, Commelyna communis; Juta-mangsee, Spikenard, Valeriana jatamansi; Juta-salpanee, Dicerma pulchellum.
Jutatoo, SANSK., from Jata, a bunch of hair, and Ayoo, life-time; properly Jatayoo.
Jute. See Fibres, 1093.
Jutho karando, DUKH., Flacourtia sepiaria.
Juti, HIND., Putranjiva Roxburghii.
Jutka. See Carriage.
Jutuga, TEL., Dæmia extensa.
Juvani, BENG., Ajwain seed.
Juvasa, Jaivasa, BENG., Alhagi maurorum.
Juvo, BENG., Hordeum hexastichon.
Juvvi, TEL., Ficus nitida, F. venosa; Pedda-jovi, Ficus t'siela.
Juwansa, HIND., Manna of Alhagi maurorum.
Juwifeh, ARAB., Ferula asafœtida.
Juwur, KASH., Euryale ferox.
Juwur, KASH., Anneslcya horrida, common in the lake of Kashmir. Its broad round leaf lies on the water like that of the lotus, its under-surface being covered with numerous hard, sharp, and hooked spicula.
Juya, SANSK., from Jee, victory, properly Jaya, Jye, Jei, Juy.
Juyanti, BENG., SANSK., from Jee, to conquer, Sesbania Ægyptiaca, Æschynomene sesban.
Juz, ARAB., a part of a book.
Juzoogri, MAHR., Antiaris innoxia.
Jy, this word in Pehlavi and Sanskrit means pure.
Jyantika, HIND., Sesbania Ægyptiaca.
Jyda-roomee, HIND., Pterocarpus draco.
Jye, SANSK., Victorious.
Jyenagar. See Hot Springs, 114.
Jye Samudra. See Debar.
J'yi-jin, CHIN., Coix lacrima.
Jyoi pana, BENG., Rhinacanthus communis.
Jyoti-Sastra, SANSK., Astronomy.
Jyotishmati, HIND., Anthistiria anathera.
Jypal, Rechuk, BENG., Croton tiglium.

K

KAAB. See Chaab.
Ka-awi of Pacific, Dioscorea aculeata.
Kabara, SINGH., Empaguaia flavescens.
Kabarra, TR.-INDUS, Capparis spinosa.
Kabir. See Kuvera; Muhammadanism.
Kablai Khan. See Arghun Khan.
Ka-bong, MALAY, Cycas circinalis.
Ka botang, LADAKH, Juglans regia.
Kabra-goya. See Cobra-tel.
Kabutar ka-jhar, HIND., Rhinacanthus communis.
Kabuto-gani, JAP., Limulus longispina.
Ka-by-ain, BURM., Ceriops Roxburghianus.
Kachain, of Ambala, Ulmus integrifolia.
Kachang-tanah, MALAY, Arachis hypogea.
Ka-chan-pa. See Ladakh.
Kachcha manu, TEL., Xanthoxylon rhetsa.
Kach'ha ghara, HIND. See Divination; Ordeal.
Kachoram, TEL., Kæmpfera galanga.
Kachu-bong, MALAY, Datura fastuosa.
Kachura, HIND., Curcuma zedoaria.
Kadalay, TAM., Cicer arietinum.
Kadali, TAM., Lagerstræmia reginæ.
Ka-dat, BURM., Crataeva Roxburghii.
Kadavi, Kadaba, CAN., Rusa Aristotelis.
Kadawah porasham, TAM., Chloroxylon Swietenia.
Kaddam, BENG., HIND., Naucles cadamba, N. parviflora.
Kaddu, HIND., Lagenaria vulgaris.
Kader. See Puliar; Pulney Hills.
Kadesia. See Khalifah.
Kadewar, SUTLEJ, Gymnosporia spinosa.
Kadizai Khel. See Afghanistan.
Kadphises. See Bactria, 223, 224; Coins, 780.
Kadukai, TEL., Terminalia chebula.
Kadul, SINGH., Carapa Moluccensis.
Kadumbairoya gass, SINGH., Diospyros sylvatica.
Ka dwaoo, BURM., Dioscorea fasciculata.
Kafi, BEAS, Oreoseris lanuginosa.
Kaf-mariam, ARAB., Rose of Jericho.
Kagahi, PANJ., Cornus macrophylla.
Kahaatta, SINGH., Careya arborea.
Kaha-gaha, SINGH., Bixa orellana.
Kaha-kaala, SINGH., Diospyros toposia.
Kaha saa-kanda, SINGH., Kæmpfera rotunda.
Kahlur. See Hill States.
Kahtan. See Arabia, 125; Himyar.
Kahu, HIND., Olea cuspidata.

Kahu, SIND., Saccharum spontaneum.
Kaibartta. See Tamluk.
Kai-dai-bi, COCHIN-CHINA, Blumea balsamifera.
Kail of Beas and Sutlej, Pinus longifolia.
Kailas temple. See Cave Temples, i. 610.
Kairwan. See Carpets.
Kaiun, N.W. HIM., Faba-vulgaris.
Kai vartaka musta, TEL., Cyperus hexastachys.
Kajal, Siahi, PERS., Lamp-black.
Kajaman. See Borneo, 419.
Kajireh, BENG., Carthamus tinctorius.
Kajo mar, JAV., Ophiorhiza mungos.
Kaju, HIND., MALAY, Anacardium occidentale.
Kaka-jangha, BENG., Leea crispa.
Kakalas, SINGH., Cynthocalyx Zeylanicus.
Kakap. See Boats, 399.
Kakar, an Afghan tribe.
Kakara, TEL., Momordica charantia.
Kaka-tati, Atcham, TAM., Diospyros ebenum.
Kakkita, Kokkita, TEL., Argyreia speciosa.
Kakmari, HIND., Anamirta cocculus.
Kaknuj, PERS., Physalis angulata; HIND., Puneeria coagulans.
Kakrin, Kulashing, RAVI, Rhus succedanea.
Kaku-kukulaju, SINGH., Dioscorea aculeata.
Kakuna-gass, SINGH., Canarium Zeylanicum.
Kakur, HIND., Cervulus aureus.
Kala-aja, BENG., Ehretia serrata.
Kalabanda, TEL., Aloe vulgaris.
Kalabatun. See Filigree.
Kala-dana, HIND., Pharbitis nil.
Kaladi, MALAY, Colocasia esculenta.
Kala-goru, TEL., Stereospermum chelonoides.
Kala-Jerablus. See Car-chemish.
Kala-jira, HIND., Nigella sativa.
Kalaka, Kalapa, TAM., Carissa carandas.
Kala kantala. SANSK., Agave Americana.
Kalambak, JAV., Eagle-wood.
Kala-megh, BENG., Chiretta.
Kala-namak, HIND. See Bit-laban.
Kalanos, his immolation, i. 434.
Kalapa, Nur, MALAY, Cocos nucifera.
Kalasi puja. See Jar.
Kalasai. See Afghanistan.
Kaldera bush—Screw pine.
Ka-le thee, BURM., Coix lacryma.
Kalhora. See Hyderabad, 135.
Kalhoti, HIND., a cylindrical vessel of mud-plaster for storing grain.
Kali, HIND., Black, female of Kala.
Kali bhui, MAHR., Black soil or regur of the Dekhan. The crops grown on it are cotton, dhangar or dry rice, moong, rape, Bengal gram, sorghum, taur, wheat, castor-oil.
Kalichi maram, TAM., Guilandina bonduc.
Kalidasa. See Literature.
Kalij. See Phasianidæ; Pheasant.
Kali jarri, Salvia lanata.
Kali jiri, Vernonia anthelmintica.
Kali kasturi, Abelmoschus moschatus.
Kali kikar, Acacia Arabica.
Kali kulti, Phaseolus radiatus.
Kali kutki, HIND., Picrorrhiza kurrooa.
Kalikutki, DUKH., Helleborus niger.
Kalila-wa-Damna. See Bidpai; Panchatantra.
Kali mort, Desmodium tiliæfolium.
Kali mung, Phaseolus mungo.
Kali ring, Quercus dilitata.
Kali sarson, Sinapis dichotoma.
Kali shumbali, DUKH., Gendarussa vulgaris.
Kali sirin, Albizzia lebbek.
Kali siwal, Amarantus anardana.
Kali tori, Luffa acutangula.
Kali tulsi, Ocimum basilicum.
Kali veem, Stezolobium altissimum.
Kali zar, also Kowa titi, Clitoria ternata.
Kali zewari, HIND., Bupleurum marginatus.
Kaljunga, HIND., Aquila nævia.
Kalki. See Avatar.
Kallaki pitta, TEL., Plotus melanogaster.
Kallat. See Chliatæ.
Kalli chemudu, TEL., Euphorbia tiracalli.
Kalli-tang-shing, LEPCH., Tupaia Peguana.
Kalloo, Kardi-aru, PERS., Amygdalus Persica.
Kalo, BENG., Kala, Kali, HIND., black.
Kaloe of Sumatra, China grass.
Kaloi, Kalovee of Sumatra, China grass.
Kalo-jamun, Eugenia jambolana.
Kalo-kera, Capparis brevispina.
Kalo-kunch, Abrus precatorius.
Kalo-mogha, Andrographis paniculata.
Kalon or Kelu of Chamba, Cedrus deodara, Deodar or Himalayan cedar.
Kalong, MALAY. See Pteropodidæ.
Kalonja, HIND., Nigella Indica.
Kaloo-habaraleya-gass, SINGH., Macreightia buxifolia.
Kalo-shim, Canavalia virosa.
Kalo tulsi, Ocimum sanctum.
Kalsia. See Sutlej.
Kal-sipi, MAHR., Gazella Bennettii.
Kalu gachcha, TEL., Psoralea corylifolia.
Kalugudu, TEL., Garuga pinnata.
Kalumawul sætiya, SINGH., Guilandina bonduc.
Kalupnath, HIND., Andrographis paniculata.
Kaluwara gass, SINGH., Diospyros ebenum.
Kalwat. See Langha.
Kalyan. See Chalukya; Lingaet.
Ka-ma-a-pe, BURM., Azadirachta Indica.
Kama-denu, HIND., 65. See Cow; Surabhal.
Kama-guchu, Hindu, Mushroom.
Kamaksha-pilli, TAM., Andropogon Martini.
Kamala, Narija, TEL., Citrus aurantium.
Kamala, Padma, HIND., Nelumbium speciosum.
Kamala Devi. See Dewala Devi.
Kama-luta, HIND., Quamoclit.
Kamanan, Manan, MALAY, Frankincense.
Kamaranga, HIND., SANSK., Averrhoa bilimbi.
Kamari, Kamira, MALAY, Aleurites triloba.
Kamba, Mokuha, HIND., Mushroom.
Kamba, HIND., Careya arborea.
Kam-ba-la, BURM., Sonneratia apetala.
Kambar Khel. See Afghanistan.
Kamba suhu, LEPCH., Presbytis schistaceus.
Kamiah, KHAS., Acer sterculiaceum.
Kamikhya—Kameswari.
Kamila, HIND., Rottlera tinctoria.
Kaminan, Minian, MALAY, Benjamin.
Kamini, BENG., Murraya exotica.
Kamjoo, TIB., Capra ægagrus.
Kamma-regu, TEL., Artocarpus lacoocha.
Kampong, MALAY, Compound.
Kampule kiray, TAM., Ærua lanata.
Kamr Khel. See Afghanistan.
Kam-ruk, HIND., Averrhoa carambola.
Kana, HIND., Commelyna, *sp.*
Kanao kya-tha, BURM., Artocarpus echinatus.
Kana-kachu, HIND., Morchella fungus, Tuber ciberium.
Kanakan—Slave.
Kanak champa, BENG., Pterospermum acerifolium.
Kanarak. See Black Pagoda.
Kanaregu, TEL., Flacourtia sepiaria.
Ka-na-za, BURM., Heritiera minor.
Kanchan, MAHR., Bauhinia, *sp.*
Kanchi, Conjeveram.
Kanchkuri, DUKH., Tragia cannabina.
Kanda, HIND., Squill.
Kandalanga, TAM., Xylocarpus granatum.
Kanda-murga-rattam, TAM., Calamus, Dragon's blood.
Kandar, HIND., Cornus macrophylla.
Kandeh Rao. See Jejuri.
Kandero, SIND., Alhagi maurorum.
Kandh. See Orissa.
Kandi, DUKH. Dracontium polyphyllum.
Kandiara, HIND., Carthamus oxyacantha.
Kandur, Luban, ARAB., Olibanum.
Kaner, Kharuba, HIND., Nerium odorum.
Kanera, Pudari of Beas, Hamiltonia suaveolens.
Kanerki. See Bactria, 224.
Kangaroo grass, Anthistiria ciliata.
Kangla mandar, CHENAB, Acer creticum.
Kangni, Kunju, BENG., HIND., Panicum, *sp.*; Millet.
Kango-jai, Chaughan-Hockey.
Kangra. See Himalaya.
Kangya, Kanguya, BENG., Urena lobata.
Kan-hzee, BURM., Zizyphus œnoplia.
Kania-danam. See Hindu; Marriage, 67.
Kanjir, HIND., PERS., Cynara scolymus.
Kanjon-bura, BENG., Kæmpfera angustifolia.
Kankari, DUKH., Cucumis sativus.
Kankhora, Gamb, BENG., Rhea, China grass.
Kan-kiang, Peh-kiang, CHIN., Zingiber officinale.
Kankli. See Chliatæ.
Kankra, BENG., Bruguiera Rheedii.
Kannadi. See Canarese.
Kan-phul, Dudli, BEAS, Taraxacum officinale.
Kanrew, TEL., Flacourtia sapida.
Kansalar. See Artisans; Hindu, 70.
Kan-spin, BHOT., Acer sterculiaceum.

Kansu, HIND., Bell-metal.
Kanta-alu, BENG., HIND., Dioscorea pentaphylla.
Kanta-koolika, BENG., Asteracantha longifolia.
Kantal, BENG., Artocarpus integrifolius.
Kan-thunji, BENG., Phœnicopterus roseus.
Kantiliya, a name of Chanakya.
Kanuga, TEL., Pongamia glabra.
Kanur of Kangra, Acer cultratum.
Kanya Kubja—Kanauj.
Kanya Kumari—Parvati.
Ka nyeen phyu, BURM., Dipterocarpus lævis.
Kan-zan, BURM., Bassia longifolia.
Kanzar of Jhelum, Fragaria Indica.
Kao-lin, CHIN. See Ceramic Manufactures; Clay; Peh-tun-tze.
Kaoorwa. See Deserts, 920.
Kapahka. See Korari.
Kapa laga, MALAY, Amomum cardamomum.
Kapa mavakum, MALEAL., Anacardium occidentale.
Kapas, Booi, HIND., Gossypium herbaceum.
Kapchak. See Chlintæ.
Kapi, SINGH., Ape.
Kapila. See Sankhya.
Kapila, Kapilapodi, TAM., Rottlera tinctoria.
Kapu kinaissa, SINGH., Abelmoschus moschatus.
Kapu mûlagu, MALEAL., Capsicum Nepalense.
Kapupa of Ptolemy—Kurur.
Kapur-kichili, TAM., Curcuma zedoaria.
Kapurthalla. See Feudatory.
Karafs, ARAB., Apium graveolens.
Karahhi lena. See Divination; Ordeal.
Karai, TAM., Webera tetrandra.
Karaita, BENG., Cicendia hyssopifolia.
Karak, PANJ., Celtis orientalis.
Kara Kalpak. See Central Asia.
Kara-kartan, TAM., Clitoria ternatea.
Kara-korum. See Central Asia.
Kara Koyi. See Orfa.
Kara-kul. See Oxus.
Karalla, Bilodar, BEAS, Falconeria insignis.
Ka-ra-mai, BURM., Sandal-wood.
Karamani, Bobbarlu, TAM., Dolichos Sinensis.
Karambak, JAV., MAL., Agallocha wood.
Karambu, Par-jamb, MAHR., Olea dioica.
Karanas. See Almanac; Panchanga.
Karanda, BENG., Carissa carandas.
Karanfal, ARAB., Caryophyllus aromaticus.
Karang, Sajor-karang, MALAY, Euchcuma spinosum.
Karang, BENG., Dalbergia arborea.
Karangalli, TAM., Acacia sundra.
Karang cottay, TAM., Ixora parviflora.
Karanj, HIND., Pongamia glabra.
Karao, Tajo, Mao, JAP., China grass.
Karas, Karil, LADAKH, Lathyrus sativus.
Karataka. See Panchatantra.
Kar-atchi, Kat udugu, TAM., Hardwickia binata.
Kara vella, MALEAL., Gynandropsis pentaphylla.
Karay cheddi, TAM., Webera tetrandra; TEL., Canthium parviflorum.
Karela, HIND., PERS., Momordica charantia.
Karen potato, Dioscorea fasciculata.
Karoo, of N.W. Provinces, Albizzia clata.
Karer, RAVI, Rubus, *sp.*
Karez—Kanat, Irrigation.
Kari, Tadru of CHENAB. See Rhamneæ.
Kariari, HIND., Gloriosa superba.
Karik, Amal-bel, CHENAB, Cissampelas pareira.
Karil, SIND., Capparis aphylla.
Karirga, TEL., Gardinia latifolia.
Kari nuchi, TAM., Gendarussa vulgaris.
Karisiye nagara. See Opian.
Kar-itti, TAM., Dalbergia sissoides.
Karka puli, TAM. Pithecolobium dulce.
Karkarra, HIND., Anthropoides virgo.
Karkava, TAM., Elæodendron Roxburghii.
Kar-kona, CAN., Gavæus gaurus.
Karku, BEAS, Ajuga bracteosa.
Karkum, Abir, PERS., Crocus sativus, Turmeric.
Karli cave. See Cave Temples, 610.
Karma-bres, HIND., Buckwheat.
Karmru of Beas, Albizzia odoratissima.
Karnafuli of Chittagong. See Rivers.
Karnataka. See Canarese.
Karne, TAM., Dracontium polyphyllum.
Karoa. See Curao; Jat; Marriage.
Karpugum, TAM., Psoralea corylifolia.
Karpura benda, TEL., Abelmoschus moschatus.
Karrak. See Babylonia, 218.
Karra-marada, TAM., Terminalia tomentosa.
Karripak, HIND., Bergera Konigii.
Karri-vembu maram, TAM., Garuga pinnata.
Karroo vaga, TAM., Albizzia odoratissima.
Kars. See i. 609.
Kart of Kulu, Hemitragus jemlaicus.
Kartakeia. See Ganapati; Parvati.
Kartelania. See Iberia.
Karuṇ chembai, TAM., Sesbania Ægyptiaca.
Karun tuti, TAM., Sida retusa.
Karupale, TAM., Putranjiva Roxburghii.
Karupu veraul, TAM. See Ophiocephalidæ.
Karur. See Pandya; Scythia.
Karusa, i. 612.
Karvel, Kawel, JAV., Arch., 99.
Karwai, Karwye, MAHR., Hymenodyction obovatum.
Karwarei, TR.-INDUS, Rubus, *sp.*
Karwat, CAN., Antiaris innoxia.
Kasakasa, TAM., TEL., Papaver somniferum.
Kasb-uz-zarireh, ARAB., Ophelia chirata.
Kashanda, Kasinda, TEL., Cassia occidentalis.
Kashastali. See Brahmans, 481.
Kashgar. See Central Asia; Turkestan.
Kashgoi. See Iliyat.
Kashgul-i-Ali—Parashawara.
Kashida, Zardosi, HIND., Embroidery.
Kashivi. See Husain bin Ali; Bidpai.
Kashmal, Sumlu, HIND., Berberis lycium.
Kasibeck, 16,546 ft. Caucasus, i. 609.
Kasina, TEL., Rottlera laccifera.
Kasinatha. See Pran-pralap.
Kasir, PANJ., Cornus macrophylla.
Kasi Raja. See Dhanwantari.
Kasr. See Babylonia; El Kasr.
Kassar, HIND., Vitis carnosa.
Kas-shin, BHOT., Juglans regia.
Kastak, PERS., Aucklandia costus.
Kastura, HIND., Moschus moschiferus.
Kasturi, Munni, TAM., Castor, Civet.
Kasturi manjal, TAM., Curcuma zedoaria.
Kasyapa. See Ikauna.
Kat, also Kaat, Kat'h, Katu, Kattu, and Katta, in several of the tongues of India and Ceylon, means wild, pseudo, uncultivated.
Kata, TAHITI, Inocarpus edulis.
Katak. See Cuttack.
Kataka, SANSK., Strychnos potatorum.
Katalli-kai, TAM., Capparis horrida.
Kat-amal, Syzygium jambolanum.
Kat-amanaku, Jatropha curcas.
Kat-ambalam, Spondias mangifera.
Kat-andar, Acacia leucophlœa.
Kataping, Bali, JAV., Amygdalus communis.
Kat arali, Cerbera odallam.
Kat arasan, Ficus, *sp.?*
Katas, HIND., Felis chaus, Viverra zibetha.
Kat-asha, MALEAL., Aloes.
Kat-atti, Bauhinia tomentosa.
Katayayana. See Patanjali; Vararuchi.
Kat-berral, BENG., Sciurus maximus.
Kat-chandan, HIND., Santalum album.
Katchli of Rajput women, a corset. See Bracelet; Brother-making.
Kat ellamicha, Atlantia monophylla.
Ka-tha khyae, BURM., Syndesmis Tavoyana.
Kat'ha kikar, DUKH., Acacia catechu.
Kat'ha-sarit-sagara. See Baital Pachisi; Literature.
Kath-bel, BENG., Jasminum hirsutum; HIND., Feronia elephantum.
Ka-thcet, BURM., Erythrina Indica.
Kath gular, Ficus cunia.
Kathi. See Cathi; Comani.
Kathia-nyal, NEPAL., Mustela kathiah.
Kat'h-shim, BENG., Canavalia virosa.
Kat'h sola, Æschynomene aspera.
Kathu, Bres, PANJ., Fagopyrum esculentum.
Katijan, Kartichey, TAM., Gloriosa superba.
Kat-illupa, Bassia latifolia and B. longifolia.
Kat-jerakam, Vernonia anthelmintica.
Kat-juti, Atropa acuminata and A. mandragora.
Kat kadugu, Polanisia icosandra.
Katkalija, Guilandina bonduc.
Kat kalungu, Dioscorea aculeata.
Kat-karahi, a kind of sugar-cane.
Katkaranga, HIND., Guilandina bonduc.
Kat-karkalum, Anisochilus carnosum.
Kat-karnay, Dracontium polyphyllum.
Kat kirba, Hyæna.
Kat koduku, Gynandropsis pentaphylla.
Kat-koli, Gallus Sonneratii.
Kat kolingi, Tephrosia purpurea.
Kat konna, Inga bigemina.
Kat kranar, HIND., Brassica, *sp.*

Kat kumbha, CAN., Trewia nodiflora.
Kat-kuto, SIND., Upupa epops.
Katl-chettu, TEL., Chrysopogon aciculatis.
Kat milalu, Vitex arborea.
Kat mitha, HIND., Rumex vesicarius.
Kat-mulingi, Sonchus oleraceus.
Kat pohu, BENG., Manis pentadactyla.
Kat-sai-nai, BURM., Urena lobata.
Kattale, TAM., Aloe Indica.
Katta terpali, MALEAL., Chavica Roxburghii.
Katti Karan. See Slave.
Kattimandu, TEL., Euphorbia cattimandu.
Kattoi, Karatiya, BENG., Jacana.
Kattoo-bodde, SINGH., Cullenia excelsa.
Kattu puvaasu, TAM., Rhus decipiens.
Katu, Katu trao, RAVI, Buckwheat.
Katu, a wilderness.
Katu alu, Ficus citrifolia.
Katu-badam, Terminalia catappa.
Katu bala, Canna Indica.
Katu bodde, SINGH., Cullenea excelsa.
Katu-clikai, Capparis horrida.
Katu imbal, Bombax Malabaricum.
Katu-indel, Phœnix sylvestris.
Katu-inshikua, Curcuma zerumbet.
Katu iriki, Asteracantha longifolia.
Katu-jadikai, Pyrrhosia Horsfieldii.
Katu jeram, Jasminum hirsutum.
Katu-jeru, Holigarna longifolia.
Katu jolam; also Katu-juluni, Kaempfera galanga, K. rotunda.
Katu kadali, or Katala, Osbeckia aspera.
Katu-kapel, Sanseviera Zeylanica.
Katu karogani, Helleborus niger.
Katu-karua, Cinnamomum iners.
Katu-karundu, Trichilia spinosa.
Katu-kasturi, Abelmoschus moschatus.
Katu-kata-kalla, Bridelia montana and B. spinosa.
Katu-katsjil, Dioscorea bulbifera.
Katu-katu, Fagopyrum esculentum.
Katu-katulla, Tomentum, or leaf of Onoseris.
Katu-kende of Ajmir, a fine-grained wood.
Katu kina, Xanthoxylon rhetsa.
Katu kittol, Caryota horrida.
Katu-kurundu, Phoberos Gærtneri.
Katu malika, Jasminum, *sp.*
Katu-malnaregam, Atalanta monophylla.
Katu manga, Buchanania latifolia.
Katu mavu, Spondias mangifera.
Katu muren, Dioscorea pentaphylla.
Katu murungi, Ormocarpum sennoides.
Katu-niruri, Phyllanthus multiflorus.
Katu nuchi, Jatropha curcas.
Katu-paira, Phaseolus rostratus.
Katu-pamburu, Pyrularia Wallichiana.
Katu-pandri, Wild boar.
Katu pitsjugum, Jasminum angustifolium.
Katu-puvarasa, Rhus decipiens.
Katur konna, BURM., Inga bigemina.
Katu-rohina, SANSK.? Helleborus niger.
Katu tandalay, Crotalaria, *sp.*
Katu-tjaka, Nauclea purpurea.
Katu tjero, Holigarna longifolia.
Katu uren, Sida cordifolia.
Katu vagay, Albizzia lebbek.
Katu yeni, Bos gaurus, the Gavæus gaurus.
Kau, kahu, ko, PANJ., Olea Europea.
Kauli, Kara-chi, Gypsy.
Kau-liang-kiang, CHIN., Alpinia galanga.
Kaulimah, MAHR., Manis, Pangolin.
Kaunchkuri, DUKH., Cowhage, Mucuna.
Kau-pen, CHIN., Cicuta virosa.
Kaur. See Chutia Nagpur.
Kaur, Kiari, SUTLEJ, Capparis spinosa.
Kaura of Beas, Acer cultratum.
Kaurava. See Pandu.
Kauri buti, JHELUM, Ajuga bracteosa.
Kavanchi, TEL., Isora corylifolia.
Kavariki, JAP., Aloes wood.
Kavatam-pillu, TAM., Andropogon schœnanthus.
Kawan, Solid oil. See Oils.
Kawar of Ravi, BEAS., Holarrhena antidysenterica.
Kawi. See Archipelago, 137; Languages.
Ka-ya, BURM., Dilivaria ilicifolia.
Kayam puvu cheddi, TAM., Memecylor ramiflorum.
Kayanian dynasty — Kambyses, Persia.
Kayan kayo, BURM., Aglaia spectabilis.
Kaye duru dumpa, TEL., Eulophia virens.
Kayu, MALAY, a tree.
Kayu api api? Rhizophora mucronata.
Kayu-arang, Ebony.
Kayu aru, Casuarina muricata.
Kayu gahru, Aquilaria agallocha.
Kayu manis china, Cassia lignea.
Kayu-puteh, Melaleuca cajaputi.
Kayu rangas, Stagmaria verniciflua.
Kayveru kelwa-ragu, TAM., Eleusine coracana.
Kazak-Kirghiz. See Central Asia.
Ka-zong-oo, BURM., Batatas edulis.
Kazwini. See Al Kazwini.
Kazzilbash. See Afghanistan, 30.
Kebbir, ARAB., Capers.
Kej, a Makran province of Baluchistan.
Kelon ka tel, HIND., Turpentine.
Kemas hylocrius, Hemitragus hylocrius.
Ken, Kimponass, JAPAN, Hovenia dulcis.
Kendu, Kiu, BENG., Diospyros melanoxylon.
Kenheri. See Cave Temples.
Ken-kyok-phyoo, BURM., Plumbago Zeylanica.
Keonjhur. See Bendkar.
Keonthal. See Hill States.
Keora, Gaganphool, HIND., Pandanus odoratissimus.
Keperit, Kapierit, SUNDA, Rhea.
Keph, ETHIOP., Kapi, TAM., Ape, Monkey.
Kerah river. See Choaspes.
Kerala. See Chera; Pandya.
Keran, Kran. See Coins, 780.
Kermanshah. See Carpets, 585.
Kerowlee. See Hindustan, 80.
Kesara-dam, BENG., Jussieua repens.
Kesari, or Lion line. See Orissa.
Kesi-raja—Kesava.
Kestril, Tinnunculus alaudarius, also Erythropus conchris.
Ketu rahu, Almanac, Panchanga.
Kewra-ki-jar, HIND., Orris root.
Keysur, DUKH., Nyctanthes arbortristis.
Keysur, Kangan mundi, HIND., Crocus sativus.
Kha-chan-yul—Ladakh.
Khadar lands. See Canals, i. 561; Husbandry.
Khagin, Aparajita, DUKH., Clitoria tornatea.
Khairn. See Orissa.
Khaja Mir. See Dard.
Khajur, Chuhara, HIND., Phœnix dactylifera.
Khajuraho. See Architecture, 143.
Khalij. See Gallophasis; Pheasant.
Khalil-ullah, or Friend of God, the title of Abraham.
Kham-ba. See Kashmir.
Kha-mi. See Hill Tracts.
Khamir, ARAB., Leaven.
K'ham-yul or K'hams-yul—Tibet.
Khanazai. See Afghanistan.
Khan Baba, literally infants' lord, a translation of Atabeg.
Khanda. See Padma Purana.
Khandagiri. See Cave Temples; Orissa.
Khangni, Rakhi, HIND., Bracelet, Brother-making.
Kha-pa-chan—Ladakh.
Kharak. See Persian Gulf.
Kharan. See Baluchistan, 255.
Kharasm, Khiva, Chorasmia.
Kharawa. See Oraon.
Kharbuzeh, HIND., PERS., Cucumis melo.
Khardul of Talmud, ARAB., Salvadora Persica.
Khare-booti, TR.-INDUS, Oreoseris lanuginosa.
Kharelwal. See Oswal.
Kharere, PUSHTU, Mushroom.
Khar laguna, NEPAL., Axis porcinus.
Kharlik. See Chliatæ.
Kharoti, a clan of the Povinda Afghans.
Kharria. See Sun-worship.
Kharshuf, ARAB., PERS., Artichoke.
Khar-zahra, PERS., Nerium odorum.
Khas, MONGOL. See Jade.
Khas-khas, HIND., Andropogon muricatus.
Khata, CHIN., a scarf of felicity.
Khatmi, HIND., PERS., Althæa rosea.
Khoda. See Keddah.
Khilaf-i-balki, PERS., Salix caprea.
Khira, PANJ., Cucumis sativus.
Khird-afroz. See Panchatantra.
Khirnoob shamee, ARAB., Ceratonia siliqua.
Khitmi, PERS., Malva sylvestris.
Khiva. See Central Asia; Kharasm.
Khmer, the Cambodia.
Khoja sect, the Ismaili. See Hyderabad, 135.
Khokand. See Central Asia.
Kholvi. See Cave Temples, 611.
Khon. See Burma, i. 526.
Khond. See Central Provinces.
Khorasani ajwain, HIND., Hyoscyamus niger.
Khostwal. See Afghanistan.
Khoung, BURM., Rice beer.
Khugiani. See Afghanistan; Khaibar.
Khulga, HIND., Gavæus gaurus.
Khulm. See Afghanistan, 31.
Khumbah, CHENAB, Agaricus campestris.
Khun-u-lavan, PERS., Dragon's blood.
Khurdah-Avasta. See Parsee.
Khuri ingots. See Coins, 780.
Khuttuk. See Khushal Khan.
Khuzistan—Susiana.
Khwaizai Khel. See Afghanistan.

Khyaw. See Hill Tracts; Khu-mi.
Khyeng. See Hill Tracts.
Khyoung tha. See Hill Tracts; Ku-mi.
Khyr. See Pramara.
Ki. See Archipelago, 135.
Kiain, PANJ., Boletus igniarius.
Kia-muh-yoh, CHIN., B'dellium.
Kiang, or Dzightai, Equus hemionus, Wild ass of Tibet.
Kiang-chu, CHIN., Amber.
Kiang-t'au, CHIN., Juglans regia.
Kia-tsze, CHIN., Solanum melongena.
Ki-chau-lan-hwa, CHIN., Chloranthus inconspicuus.
Kichli gadda, TEL., Curcuma zedoaria.
Kienki, LEPCHA, Bochmeria frutescens.
Kien-shih, Ki-tu, CHIN., Euryale ferox.
Kierpa, BENG., Carallia integerrima.
Kijang—Cervidæ.
Kikar, HIND., *sp.* of genus Acacia.
Kikkasa gaddi, TEL., Amphidonax karka.
Ki-ku-tsze, CHIN., Cock's claw fruit.
Kilar, HIND., Fothergillia involucrata.
Kilei, Killar, HIM., Cedrus deodara.
Kilingi, NEIL., Acrocarpus fraxinifolius.
Ki-lin-kieh, CHIN., Dragon's blood.
Killar, Kirru, Parc, CHENAB, Parrotia Jacquemontiana.
Killh, JHEL., Acer cultratum.
Killia, CELEBES, Broussonetia papyrifera.
Kilmung, Keling, TIBET, Cedrus deodara.
Kilu, Kaliun, PUSHTU, Chamærops Ritchiana.
Kilut, Gatap, MALAY, Bird-lime.
Kimkhab. See Brocade; Cotton Manufactures.
Kimsukamu, TEL., Butea frondosa.
Kim-yu (the tallow), CHIN., Stillingia sebifera.
Kingi of Chenab, Urtica heterophylla.
King-san-ling, CHIN., Cyperus hexastachyus.
King-yu, CHIN., Spermaceti.
Kin-hang, Hang-jin, CHIN., Apricot.
Kinibalao, a mountain of Borneo 1300 feet high.
Kin-kang-shih, CHIN., Corundum.
Kin-kiuh, CHIN., Citrus Japonica.
Kin-ling-tsze, CHIN., Eriobotrya Japonica.
Kinneh, PERS., Galbanum officinale.
Kinnub, ARAB., Hemp.
Kinoon la, BURM., Rottlera tinctoria.
Kin-poh, CHIN., Gold-leaf.
Kin-sze ta'an, CHIN., Hypericum Chinense.
Kin-wha, CHIN., Golden flowers. See Brass Leaf.
Kin-yin-hwa, CHIN., Honeysuckle.
Kiral boghi, GHATS of S. CAN., Hopea parviflora.
Kiranti, Kirata. See Cirrhatæ; Hill Tracts.
Kiratar-juniya, Literature.
Kirghis-Kazak. See Central Asia.
Kiri anguna, SINGH., Gymnema sylvestre.
Kiriat, HIND., Agathotes chirayta, Andrographis paniculata.
Kirri palla gass, SINGH., Ficus von-
Kirshuf, ARAB., Cynara scolymus.
Kisari, HIND., Lathyrus sativus.
Kishenghar. See Hindustan, 80.
Kisho-roj, BENG., Wedelia calendulacea.
Kisti, DEKH., Bixa orellana.
Kistvaens. See Burial Customs.
Kitchili kolinjy, TAM., Citrus aurantium.
Kites, *sp.* of Haliastur, Milvus, Baza, Elanus.
Kitla, Kakrai, CHENAB, Acer creticum.
Kitta nara, TAM., Fourcroya cantala.
Kiuh-lo, CHIN., Orange zest.
Kiung-shu, CHIN., Stillingia sebifera.
Kiu-siu. See Japan.
Kiwach, HIND., Cowhage, Mucuna.
Knot and Stint, *sp.* of Tringa, Eurinorhynchus, Phalaropis.
Knot grass—Illecebraceæ.
Koamil, Kalam of Beas, Glochidion velutinum.
Koang-sze-teng. See Boats, 400.
Koch, SIND., Ovis cycloceros.
Koch'h. See Boro, 420.
Koch'ho, SIND., Village common.
Kodaga pala, TEL., Wrightia antidysenterica.
Kodapana, MALEAL., Corypha umbraculifera.
Kodi, Nella budinga, TEL., Cucumis pubescens.
Kodigam, TAM., Tylophora asthmatica.
Kodo, HIND., Paspalum stoloniferum.
Kodu, Lau, BENG., Lagenaria vulgaris.
Koel. See Sirguja.
Koel, HIND., Eudynamis orientalis.
Koh-i-Kaf. See Mount.
Koh-i-Meeriah. See Coal, 753.
Kohl, ARAB., Lamp-black.
Koho-khur of Kashmir, Hydnum coralloides.
Koit-ka-jhar, HIND., Feronia elephantum.
Kok, CAN., Nesokia Indica.
Kokkanistha. See Brahmans, 432; Deshasth.
Kokla, HIND., Sphenocercus sphenurus, a green pigeon of the Himalaya.
Koknar, Post, HIND., Papaver somniferum.
Koko Nar. See Kalmuk.
Kola, HIND., Canis aureus, Jackal.
Kolarians. See Central Provinces; Aborigines.
Kola tunga musto, TEL., Cyperus pertennis.
Kolcuttay teak maram, ANGLO-TAM., Premna tomentosa.
Kole-bhaloo, HIND., an old jackal.
Kolehan. See Bendhar; Ho; Kol.
Koleroga. See Coffee Planting, 776.
Kolhapur. See Hindustan, 81.
Koli-surrah, MAHR. See Bombyces; Insects.
Kollari race. See Puducottah.
Kolopu, TEL., Grewia Rothi.
Kolsa, Kolasre, MAHR., Cuon rutilans.
Kolwah, Sea-coast Province of Baluchistan,
Komal, PUSHTU, Prangos pabularia.
Komatti. See Comptl.
Kombawut. See Bhumia, 353.
Kominjan, MALAY, Styrax benzoin.
Kond. See Kandh.
Konda, TEL., a hill.
Konda dantena, TEL., Smilax ovalifolia.
Konda gogu, TEL., Cochlospermum gossypium.
Konda jiligu, TEL., Caryota urens.
Konda kalava, TEL., Knempfera rotunda.
Konda nimma, TEL., Atalantia monophylla.
Konda panna, TAM., Caryota urens.
Konda tangedu, TEL., Inga xylocarpa.
Konda tantepu chettu, TEL., Cassia glauca.
Kond-guri, CAN., Tetraceros quadricornis.
Kongilamu, TAM., Canarium strictum.
Konkan. See Concan; Languages.
Konne, Sarakonne, TAM., Cathartocarpus fistula.
Kontkuri muga. See Assam; Bombyces.
Kopang. See Coins, 780.
Kophene. See Parashawara.
Kophones. See Coins.
Koracharu, a tribe in the Carnatic, who make bamboo mats and baskets, and carry betel-nut from market to market. A Korawa race also inhabit the Hakhal Hills and near the Godavery.
Kora kora. See Boats, 399.
Koraman, Koramaddi, TEL., Bridelia retusa.
Koresh. See Imam.
Korina-neboo, HIND., Citrus limonum.
Korinchi. See Archipelago, 137.
Korkura of Ptolemy—Kerkook.
Korna gandu, TEL., Hyæna striata.
Kortumbah tummah, PANJ., Citrullus colocynthis.
Kosala, Gorakhpur.
Kosha. See Divination; Ordeal.
Kota. See Dravidian.
Kotah. See Hindustan, 80.
Kot-avere, TAM., Cyamopsis psoraloides.
Koti, TEL., Macacus radiatus.
Koti kalangu, TAM., Aponogeton monostachyon.
Kotimiri, TIB., Coriander seed.
Kotri, Kuru of Bustar, Tetraceros quadricornis.
Kotuk of Sind, Glinus lotoides.
Kouen Lun. See Bulut Tagh; Central Asia; Ladakh.
Koulan of Kirghiz, Equus onager.
Kouryal Bandar—Cannanore.
Kowatheti, HIND., Clitoria ternatea.
Kowlie mutchie, DUKH., Pluronectis solea.
Kowli-manjra, MAHR., Pangolin.
Kowtee, MAHR., Hydnocarpus inebrians.
Kowtoukton. See Geesoo.
Koya tota kura, TEL., Amarantus tristis.
Krabu gaha, SINGH., Caryophyllus aromaticus.
Krakatoa. See Java.
Kriat, CAN., DUKH., HIND., Andrographis paniculata.
Krin koddy nar, TAM., Smilax ovalifolia.
Krishna Dwaipayana. See Pandu.
Krishna keli, BENG., Mirabilis jalapa.
Krishna tamara chettu, TEL., Canna Indica.
Ksheera, SANSK., Milk, from Kshar, to ooze out.
Kuco, BURM., Carthamus tinctorius.

Kuay kalung, MALEAL., Curcuma angustifolia.
Kubbi, Kubi, PERS., Apc.
Kubel, Ganjni, HIND., Andropogon Martini.
Kubjakam, TEL., Trapa bispinosa.
Kubung, MALAY, Galeopithecidæ, Lemuridæ.
Kubup, BHOT., Presbytis schistaceus.
Kuchan, SALT RANGE, Asparagus Panjabensis.
Ku-chandana, HIND., Adenanthera pavonina; TEL., Pterocarpus santalinus.
Kuchila, HIND., Strychnos nux vomica.
Kuchila luta, BENG., Strychnos colubrina.
Kuchu, HIND., Colocasia antiquorum.
Kuchu gundubi, BENG., Homalonema aromaticum.
Kuchuri, BENG., Exacum tetragonum.
Kuda-ayer, MALAY, Tapirus Malayanus.
Kuddia-khar, BENG., Borax.
Kuddu, GUJ., HIND., Helleborus niger.
Kudia nim, HIND., Bergera Konigii.
Kudrap-dukku, TAM., Sterculia fœtida.
Kudrati, Pad-behera, HIND., Mushroom.
Kudsumbar of Bombay, Canavalia virosa.
Kudumi, TAM. See Sikha.
Kuduru jivi, TEL., Putranjiva Roxburghii.
Kufa. See Babylonia; Boats, 392.
Kuff, Kuffee, Sookta, PANJ., Chaptalia gossypina.
Kufra of Sutlej, Oreoscris lanuginosa.
Kuka gori, TEL., Cervulus aureus.
Kukai, Wurak, TR.-INDUS, Rhamneæ.
Kukandra of Jhelum, Acer creticum.
Kuke, HIND., Flacourtia sapida.
Kukha. See Bimba.
Kuki. See Khaibar, also Kha-mi.
Ku-kiuh-hwa, CHIN., Anthemis nobilis.
Kuktuka, HIND., Ixora bandhuca.
Kukur chita, BENG., Tetranthera Roxburghii.
Kukur-mutta, HIND., Mushroom.
Kulanjan, ARAB., HIND., Alpinia galanga.
Kula Sikara-patanam. See Pandya.
Kulat, Chandawan, MALAY, Fungus, Mushroom.
Kuldi. See Chaldee.
Kuldja. See Central Asia.
Kulf, ARAB., Chenopodium album.
Kulfa-ka-tel of Malabar, Cassia oil.
Kulhar. See Hill States.
Kulinism, i. 433.
Kulit manis, MALAY, Cinnamon.
Kulit-panu, MALAY, Tortoise-shell.
Kul kushanda, BENG., Smithia sensitiva.
Kullora. See Deserts, 920; Hyderabad; Sind.
Kull pashi, TAM., Lichen rotundatus.
Kulla. See Hot Springs, 112.
Kulm. See Afghanistan, 30.
Kulmara, CAN., Calysaccion angustifolia.
Kulpha, HIND., Trichodesma Indicum.
Kulti, HIND., MAHR., Dolichos uniflorus.
Kulung, HIND., Grus cinerea.
Kulzum, the Caspian Sea.
Ku-mai-tsi, Tu, CHIN., Cichorium intybus.
Kumara. See Har; Hur.
Kumari. See Puna Kad.
Kumarika, BENG., Smilax ovalifolia.
Kumbha-yoni. See Kama-Kumbha.
Kumbhi, TEL., Careya arborea.
Kumbi of Bena, Cordia vestita.
Kum Feroz, the modern Araxes.
Kumharsein. See Hill States.
Ku-mi. See Burma, i. 526.
Kum-phok, BURM., Platinum.
Kum-quat, CH., Citrus Japonica.
Kumra, Chal kumra, BENG., Benincasa cerifera.
Kumruk, DUKH., Averrhoa carambola.
Kun, BENG., Schleichera trijuga.
Kunch, Koish, HIND., Alnus Nepalensis.
Kundar rumi, PERS., Pistacia.
Kundi puchi, TAM., Kuneta Cramerii.
Kundurya, SANSK., Boswellia thurifera.
Kunduz. See Afghanistan, 30.
Kungiliam, TAM., B'dellium, Dammer.
Kung-tsau, CHIN., Jujube tree.
Kungumapu, TAM., Crocus sativus.
Kunhiar. See Hill States.
Kunkeraoli Lake. See Lakes.
Kunkudu, TEL., Sapindus emarginatus.
Kunkuma puvvu, TEL., Rottlera tinctoria.
Kunnean phiu, BURM., Dipterocarpus grandiflora.
Kun-sura-no-fun, JAP., Ambergris.
Kunt'h-mala, HIND., Goitre.
Kunti. See Pandu.
Kupaisi, Joa-ka-phal, HIND., Helicteres isora.
Kupameni, MALEAL., TAM., Acalypha Indica.
Kuppi kire, Ara kire, TAM., Amarantus tristis.
Kur. See Kol.
Kura, PANJ., Holarrhena antidysenterica, seed.
Kura, Kurat, MAHR., Ixora parviflora.
Kuragu manjal, TAM., Bixa orellana.
Kural, HIND., Hemidesmus Indicus.
Kurd. See Baluchistan, 257.
Kurelee, HIND., Hydrilla verticillata.
Kur katila, Katira, HIND., Sterculia urens.
Kurku. See Central Provinces.
Kurna. See Persia.
Kurroos, Karru, PANJ., Picrorrhiza kurrooa.
Kurt, a Kábul fabric of goats' hair.
Kurubar. See Dravidian.
Kuru-Kshetra—Krishna.
Kurumchi, BENG., Carissa carandas.
Kurunda, HIND., Carissa carandas.
Kuru pandi, TEL., Memimna Indica.
Kuru-ul-bahr, ARAB., Ambergris.
Kuru-vingi, TAM., Ehretia buxifolia.
Kurwan, Kumla, MAHR., Crateva Roxburghii.
Kurwye, MAHR., Hymenodyction utile.
Kusagarapura, the old capital of Magadha, also called Girivraja and Rajagriha, now Purana Rajgir.
Kusha, Kusa, HIND., SANSK., Poa cynosuroides.
Kusair, BENG., Ficus elastica.
Kustam, TAM., Aplotaxis auriculata.
Kusum, HIND., Carthamus tinctorius.
Kusumapura, Pataliputra.
Kusumba chettu, TEL., Carthamus tinctorius.
Kut, HIND., Aplotaxis auriculata.
Kutal of Hazara, Daphne oleoides.
Ku-tsai, Ku-ku, CHIN., Cichorium intybus.
Kutub minar, Jaya stambha. Architecture, 169; Sculptures.
Kuur Mundla. Husbandry, 126.
Kuvera-chal—Karachil.
Kwang, CHIN., Aucklandia costus.
Kwang-wu, CHIN., Aconitum Sinense.
Kwan yin, the China goddess of mercy.
Kwei-kui, CHIN., Caladium xanthorizum.
Kwei-pi, CHIN., Cassia lignea.
Kwei-tsze, CHIN., Cassia buds.
Kwi klapot, KANGRA, Cuscuta pedicillata.
Kwon len phyoo, BURM., Dracæna atropurpurea.
Kwun, BURM., Areca catechu.
Kya, Gigartina spinosa, Agar-agar; Plocaria candida.
Kyai-tha, BURM., Barringtonia acutangula.
Kyan. See Borneo, 419.
Kyang. See Equus; Horse, 109.
Kya-phyu, BURM., Nymphæa pubescens.
Kyd, Captain. See Commerce, 790.
Kyee, BURM. of Moulmein, Cassia Sumatrana.
Kyen. See Burma, i. 526.
Kyen, HIND., Nauclea parviflora.
Kyet mouk, BURM., Celosia cristata.
Kyet-tha-hen, BURM., Antidesma paniculata.
Kyl of Kashmir, Ibex.
Kyouk puen, BURM., Algæ, Seaweeds.
Kyoung-tha. See Chittagong.
Kyur of Kangra, Holarrhena antidysenterica.
Ky-wae, BURM., Spondias mangifera.
Ky-won, BURM., Tectona grandis.
Ky-won-po, BURM., Gmelina arborea.

L

La, TIB., a pass.
La, CHIN., Wax.
Labáda, HIND., a dressing-gown. See Clothing, 747, 748.
Labo ambon, MALAY, Lagenaria vulgaris.
Labo-frangi, Cucumis melo.
Labuniya, SYRIAC, Olibanum.
Lacki-lacki, MALAY, Cannabis sativa.
Lacoocha, Bread-fruit, Artocarpus lacoocha.
Lacquer ware. See Arts, 171; Colour Sticks.
Lactuca sativa, Lettuce.
Lada barekor, MALAY, Cubebs.
Lada china, MALAY, Capsicum, Cayenne pepper.
Lada itam, MALAY, Piper nigrum.
Ladakh. See Hot Springs, 111, 112; Kashmir; Kha-chan-yul.
Laet, John de Laet, author of India vera, written A.D. 1631.
Lag, Lawa, TIB., Moschus moschiferus.
Lagen, Barum, Baru? JAP., Arenga saccharifera.
Laggar, HIND., Falco jugger, also Falco jubata.
Lagurus arundinaceus, Imperata cylindrica.

Lahep, a clan of the Mowali Bedouins.
Lah-kan, CHIN., Horse-radish.
Lahouli. See Kohistan.
Lahsan, HIND., Garlic, Allium sativum.
Lah-shu, CHIN., Ligustrum lucidum.
Lái, Let-pan, BURM., Salmalia Malabarica.
Lai-may, the Black Necks tribe. See Bghai.
Lai-zah, BURM., Lagerstrœmia pubescens.
Lajaward, Lajburd, HIND., Lapis-lazuli.
Lajja banar or Lajjawoti-banar, BENG., Bashful monkey, Nycticebus tardigradus. See Lemuridæ.
Lakara-kunda. Hot Springs, 114.
Lakar-bag, Hyæna striata.
Lakati, HIND., Parodoxurus musanga.
Lak-chana, HIND. See Oxalidaceæ.
Lakha. See Jell.
Lakhar, HIND., Rhus acuminata.
Laksha, SANSK., a lakh, a hundred thousand; commonly lac, the insect producing the commercial lac.
Lakshmana. See Sita.
Lakshmi or Maha Lakshmi. See Hindus, 67; Sakta.
Lakshmi narayana, TEL., Crinum Asiaticum.
Lakshmi-vriksha. See Kalpa-vriksha.
Laku-chamma, TEL., Artocarpus lacoocha.
Lakwa of Arakan, Polynemus selea, the suliah fish of Bengal.
La-kyat hgying, BURM., Eclipse.
Lalayang. See Kite.
Lal ban langa, BENG., Jussieua villosa.
Lal bichhutee, BENG., Boehmeria interrupta.
Lal-chandana, DUKH., Pterocarpus santalinus.
Lal chanlai, HIND., Amarantus anardana.
Lal-chirohiri, HIND., Achyranthes aspera.
Lal-gul, HIND., Gomphrena globosa.
Lal-kunwar, a public singer—woman.
Lal lamba mirch, BENG., Capsicum frutescens.
Lall kheir, HIND., Acacia sundra.
Lallye, MAHR., Albizzia amara.
Lalo, FR. of Maur., Abelmoschus esculentus.
Lamajjakamu, SANSK., Andropogon muricatus.
Lamantin. See Carving.
Lambadi, Ilambadi.
Lambang nut tree, Aleurites triloba.
Lam-chittis of the Khas tribe, Felis diardi.
La-men, Nsemon, BURM., Eurycles Amboinensis.
Laminaria. See Sea-weeds.
Lamoot, BURM., Mangifera Indica.
Lampa, HIND., Chrysopogon aciculatis.
Lampong. See Archipelago, 137.
Lamuja, Lampung, Citrullus cucurbita.
Lamut, MALAY, PERS., Ant.
Lanas, MADURESE, Ananas sativus.
Land crabs. See Crustacea; Gelasmi.
Landgah, HIND., Canis pallipes, Wolf.
Landolphia. See Caoutchouc.
Lanee, SIND., Salt plants, species of Salsola, called Gahro lanee, Khari lani, and Konti lani; also species of Suæda Acut lani or Ushuk lani; also Xygophyllum simplex, the Put lani or Gudha lani; also Trianthoma micrantha, the Choti lani or Fysur lani.
Lang, GUJ., Lathyrus sativus.
Langa, HIND., a petticoat.
Langar, BENG., HIND., Anchor.
Lang chan. See Bore; Eagre.
Langkwa, MALAY, Galangal.
Langsab, Langsat, MALAY, Lansium domesticum.
Lang-tuh, CHIN., Aconitum lycoctonum.
Language. See Archipelago; Central Provinces; Chaldee; Cuneiform; Himalaya; Hindi; Hindustan; Hittite; Turkestan.
Langulae, SANSK., Jussicua repens.
Langur, *sp.* of Presbytis.
Lang-yen-bwen, BURM., Cloves.
Laning, HIND., Vitis Indica.
Lankaramya. See Pallonarua.
Lanner, Falco Babyloni.
Lan-shu-lih, CHIN., Argemone Mexicana.
Lansi puscara, SINGH., Borax.
Lan-tien, CHIN., Indigo.
Lanun, Illanun.
La-nyen-pwen, BURM., Caryophyllus aromaticus.
Laokalam. Hindu, 70.
Laos. See Cochin-China; Colquhoun.
Lap, Pataki, KANGRA, Gymnosporia spinosa.
Lapis-lazuli. See Azure Stone.
Lapwings, *sp.* of Vanellus, Chettusia, Lobivanellus, Sarciophorus, Hoplopterus, Esascus; Œdicnemus, Dromas.
Lares, Penates, Roman.
Larix. See Coniferæ.
Lark. See Alaudinæ; Birds; Galerida.
Larka Kol. See Kol.
Larrak. See Larck.
Larsa. See Babylonia, 218.
Las, maritime district of Baluchistan.
Lashte, TR.-IND., Asparagus Panjabensis.
Lashuna, BENG., Allium sativum.
Lasran Khel. See Afghanistan.
Lasrin, PANJ., Albizzia stipulata.
Lassar, HIND., Juniperus communis.
Lasura, HIND., Cordia myxa.
Lat. See Architecture, 143; St'hamba.
La tag—Ladakh.
Lathia kharsan, HIND., Crotalaria burhia.
La-thou, BURM., Wrightia antidysenterica.
Latkan, HIND., Bixa orellana.
Lau. See Burma, 526; Laos.
Laughing thrushes, *sp.* of Garrulax and Trochalapteron.
Laun-don, CHIN., Galangal.
Laur, Kanjar, SUTLEJ, Acer cultratum.
Laurus cassia, Cinnamomum albiflorum.
Lau-yeh, Ku-tsing, CHIN., Betel leaf.
Lauz, ARAB., Almond.
Lavangam, TAM., Cloves.
Lavendula carnosa, Anisochilos carnosum.
Lawa, TIB., Moschus moschiferus.
Lawang, JAV., Cibves.
Lawanga patta, TEL., Cassia lignea.
Lawange, TR.-IND., Artemisia.
Lawful—Halál.
Lawooloo-gass, SINGH., Chrysophyllum Roxburghii.
Layard, Edgar. See Birds, 367.
L'dmau (female), HIND., Capra Himalayana.
Leaf bats, Rhinolophus, *sp.*, Rhinopoma.
Leaf disease. See Coffee Planting, 775, 776.
Leaf insects. See Insects; Phasma.
Leaf ordeal. See Divination.
Leaf platters. Hindu, 65.
Lebuk of Avicenna, Cordia myxa.
Lecanium. See Coffee Planting, 773.
Lecanora perella, L. tartarea, Cudbear. See Archil; Dyes.
Lechayannasa. See Yugbynsa.
Left-hand castes. See Caste.
Lei, HIND., species of Tamarisk; Ghaz lei, Kach lei, is Tamarix dioica; Khar lei, Misri lei, Nar lei, is Tamarix orientalis.
Lemna gibba, Duck-weed.
Lemon, Citrus limonum.
Lemon grass, Andropogon schœnanthus.
Lemur. See Galeopithecidæ; Lemuridæ; Loris; Mammalia; Nycticebus; Tarsius.
Len-kyau, BURM., Cinnamomum iners.
Leopard, Felis pardus.
Leopoldinia piassaba, Piassaba fibre.
Lepcesh, NEPAL., China grass.
Lepidagathis Indica. See Carpets, 587.
Lepidocaryeæ. See Cocoaceæ.
Lepidoptera. See Insects; Papilionidæ.
Lepisma, Fish, Insects.
Leptoptilos argala. See Herons; Storks.
Lepuranda saccidora, Antiaris innoxia.
Leschenault. See Botany.
Lespedeza juncea, Indigofera aspalathoides.
Lesser vehicle. See Kanishka.
Lettsomia speciosa, Argyreia speciosa.
Leung-fan-tsai, CHIN., Algæ, Seaweeds, Laminaria.
Lew, CHIN., Sulphur.
Lewar, or Deodar, CHENAB, Juniperus excelsa.
Lhala, BHOT., Hippophae salicifolia.
Lhopa. See Bhutan.
Li, Kamla, CHENAB, Gymnosporia spinosa.
Liang-tsau, CHIN., Jujube tree.
Libation. See Oblation; Sacrifice.
Libi-libi, Divi-divi, Cæsalpinia coriaria.
Liblab, EGYPT., Lablab vulgare.
Lichen. See Borrera; Chulchilhera; Dyes; Iceland Moss; Kal Pashi; Parmeliaceæ.
Lign aloes, Agallocha wood.
Ligor. See Coal, 754.
Lih-kin, CHIN., Acorns.
Likh, HIND., Bustard, Sypheotides auritus.
Lil, HIND., Indigo.
Lilin, MALAY, Bees-wax.
Limau manis, MALAY, Orange.
Limboo, DUKH., Citrus bergamia.
Limnastus. See Eagle.
Limnoria terebrans. See Whales.
Limodorum virens, Eulophia virens.
Limonia, *sp.* Atalantia monophylla.
Limonia diacantha, Triphasia trifoliata.
Limosia, Godwit. See Scolopacidæ.
Limu, Nimbu, HIND., Citrus bergamia.
Ling, CHIN., Trapa bispinosa.
Linga Basavi. See Basavi.
Linga donda, TEL., Bryonia laciniosa.

Lingam. See Chuli.
Linga manu, Tel., Crozophora plicata.
Lingli, or hill carp, Manis aurita, Manis Javanica.
Linhay, Len-hæ, Burm., Acorus calamus.
Lion monkey, Innuus silenus.
Lipiah of Nepal, Boehmeria utilis.
Lippia citriodora, Aloysia citriodora.
Lippia repens, Zapania nodiflora.
Liquid storax, Rose maloes.
Lisan-ul-assafeer, Arab., Conessi seed.
Lisan-us-saur, Arab., Cacalia cocoinea, Hart's ear.
Litaki-pangeri, Dukh., Anisochilos carnosum.
Literature. See Drama; Hindu, 74.
Lithocarpus benzoin, Styrax benzoin.
Lit-htuk, Burm.? Alstonia scholaris.
Litmus, Eng., Lecanora Tartarica.
Little Bokhara—Kashgar; Buchara.
Liu-chin. See Colours, 786.
Liu-li-chin, Lapis-lazuli.
Livistonia rotundifolia. See Celebes.
Li-yang, Chin., Homalium Ceylanicum.
Liyar, Sind., Cordia angustifolia.
Lizard. See Hydrosauri; Iguana; Palle-Satterum; Reptiles; Varanidæ; Water Lizards.
Lobeh, Hind., Dolichos catjang.
Lobster—Palinurus.
Locharna of Ptolemy, identified with Logar.
Locust. See Insects; Phanga.
Locust bean, Ceratonia siliqua.
Locust tree, Hymenæa courbaril.
Lodar of Kangra, Falconeria insignis.
Lodduga, Tel., Symplocos racemosa.
Lod'h, Beng., Hind., Symplocos racemosa.
Lodhi. See Central Provinces.
Loepa. See Bombyx, 411.
Logger-head turtle, Caouana olivacea. See Reptiles.
Lohani, a clan of the Povindah Afghans. See Deserts; Hyderabad.
Lohardagga. See Oraon.
Loh-hwa-sang, Chin., Arachis hypogea.
Lohiya. See Oswal.
Lokam, Hind., Gun-metal.
Lokik Brahmans, i. 434.
Lolan, Amboyn., Cæsalpinia sappan.
Loligopsis. See Sepiadæ.
Lolu, Singh., Cordia myxa.
Lolugu chettu, Tel., Pterospermum suberifolium.
Lomas Rishi Caves, i. 611.
Lombok, Jav., Chillies.
Long, Lavang, Hind., Caryophyllus aromaticus.
Longan, Chin., Euphoria longana.
Lontar, Malay, Borassus flabelliformis.
Lophobranchii. See Fishes; Syngnathidæ.
Lophophorus. See Phasianidæ.
Lophorina superba, Paradise birds.
Loureiro. See Botany.
Louz, Arab., Amygdalus communis.
Love apple, Lycopersicum.
Lowa Maha Paya. See Pallonarua.
Lowi, Mahr., Artocarpus lacoocha.
Luban, Dukh., Pers., Boswellia thurifera.
Lubani ud, Hind., Styrax benzoin.
Lubek. See Bawean.
Lucina. See Parvati.
Ludia spinosa, Phoberos Roxburghii.
Lughmani. See Afghanistan.
Lugri. See Phao.
Luh-lan, Wu-lan, Chin., Canarium pimela.
Luh-suh, Tih-che, Chin., Sorghum saccharatum.
Luk or Loo, Guz., Coup de Soleil.
Lu-kiuh, Kin-lin-tsze, Chin., Eriobotrya Japonica.
Lumbo, Burm., Buchanania latifolia.
Luminous fishes. See Fishes, 1114.
Lumnitzera densiflora, Plectranthus rugosus.
Lumri, Hind., Vulpes, *sp.*, Fox.
Lumri. See Deserts, 920.
Luna meba, Beng., Anona squamosa.
Lunar race. See vol. i. 451; Aswa; Induvansa; Pandu; Rajput; Solar Race; Sun-worship.
Lunawut. See Bhumia, 353.
Lungi, Hind. See Clothing, 748.
Lung kwei, Chin., Solanum nigrum.
Lung-sin-hiang, Chin., Dragon's blood.
Lunia, Beng., Portulaca oleracea.
Luni-solar year. See Panchanga.
Lu-pa, loo-pa, Chin., Fish maws Isinglass.
Lupinus trifoliatus, Cyamopsis psoraloides.
Luppa, Kimkhab, Hind., Brocade.
Luri, Luli, Lohari, Pers., Gypsy.
Luri Buzurg. See Bakhtiari.
Luri-ka-kodan. See Choukandi.
Luristan—Koghila.
Luscinia. See Bulbul; Philomela turdoides.
Lu-sungma, Chin., Agave Americana.
Lutiana, Assam, Alstonia scholaris.
Lutjanus diacanthus—Johnius.
Lut putiah, Hind., Cress.
Luvunga, Beng., Eugenia caryophyllata.
Lu-wei, Lah-wei, Chin., Aloe Chinensis.
Luxor. See Karnak.
Lwai-lohug. See Bghai.
Lwugi, Pers., Hearth tax.
Lycodontidæ. See Reptiles.
Lye-nya-sha, Burm., Paritium tiliaceum.
Lynx, Felis caracal.
Lysias. See Bactria, 222.

M

Ma, Tu-sung-ma, Chin., Hemp.
Ma-ao, Gondi, Rusa Aristotelis.
Macacus. See Inuus rhesus; Papioninæ.
Macassar. See Celebes, 616.
Machaba, Nepal., Paradoxurus bondar.
Machana, Makhana, Hind., Euryale ferox.
Macharang, Hind., Haliætus fulviventer.
Mach-bagrul, Beng., Felis viverrina.
Mach-bhondar, Beng., Viverra zibetha.
Macheri. See Rajputs.
Machilus odoratissimus. See Pat'har.
Machi-parna, Hind., Artemisia.
Mach-korol, Koral, Mach-manga, Beng., Pandion haliætus.
Mach-moral, Hind., Polioætus ichthyoetus.
Mackerel, Caranx mate. See Fishes, 1118.
Mackwy, Dukh., Hemidesmus Indicus.
Macroglossus minimus, Pteropodidæ.
Macropodus. See Fishes, 1116.
Macrorhamphus, the godwit. See Scolopacidæ.
Macullah. See Hot Springs, 111.
Madagari vembu, Tel., Chickrassia tabularis.
Madagascar—Hova.
Mada Khel. See Afghanistan.
Madana, Tel., Spermacoce hispida.
Madana. See Chatur-dasi.
Madana-ghanti, Tel., Alternanthera sessilis.
Madanchur, Beng., Leptoptilos Javanica.
Madang, Singh., Eugenia jambolana.
Madár, Akund, Hind., Calotropis gigantea.
Madára-grass, Singh., Cluytia collina.
Madaru, Madigaru, Coorg, Chamar, Leather-workers.
Madder, Rubia cordifolia.
Maddi, Nalla maddi, Tel., Terminalia tomentosa.
Maddi, Mulugu, Tel., Morinda citrifolia.
Maddi rubba chettu, Tel., Eleusine stricta.
Madetiye, Singh., Adenanthera pavonina.
Madha, Sansk., Honey.
Madhan, Hind., Opium.
Madhavacharya. See Bottu.
Madhavitige, Tel., Hiptage madablota.
Madheri, Tam., Anisomeles Malabarica.
Madhuka, Sansk., Glycyrrhiza.
Madiga, Leather workers, Chakili, Tam.
Madmalti, Panj., Hiptage madablota.
Madoo grass, Singh., Cycas circinalis.
Madrepora, Zoophyte.
Madu karray, Tam., Randia.
Madun nirbisi, Hind., Kæmpfera angustifolia.
Madurkati, Hind., Papyrus pangorei.
Maemana. See Afghanistan.
Maesta pat, Beng., Crotalaria juncea.
Ma-fuen, Chu-tsao, Chin., Ganja, Hemp.
Magadha, the modern Behar.
Magnesite. See Cement.
Magpie robin, Copsychus saularis.
Magpies, *sp.* of Pica, Urocissa, and Dodrocittinæ.
Magr, Kumhir, Hind., Crocodile.
Magraba, Hind., Hemidesmus Indicus.
Magunmurchy, river. See Cauvery.
Magura. See Fishes, 1116.
Magus, a name of Ali Abbas.
Maha, Him., Rucervus Duvaucellii, also Rusa Aristotelis.
Mahabalipur. See Cave Temples, i. 610.
Mahadeo. See Rori Barolli.
Mahadeo ka phul, Hind., Daphne cannabina.
Maha-kavya. See Literature.
Mahanadi. See Diamond Rive, i. 563; Rivers.
Maha-naram, Singh., Citrus decumana.
Maha-pus-wael, Singh., Entada pursætha.
Mahaputrjivi, Tel., Putranjiva Roxburghii.

Maharajpur, Sindia.
Maha tita, BENG., Andrographis paniculata.
Mahavira. See Jain; Tirthankara.
Mahayana. See Boro-Bodor, 421.
Mahdi. See Imam.
Mahesha. See Parvati.
Mahilaropya. See Panchatantra.
Mahir. See Parsee.
Mahlaing, BURM., Broussonetia papyrifera.
Ma-hnyo-ban, BURM., Gomphrena globosa.
Mahoor, HIND., Aconitum napellus.
Mahori, Tingi, HIND., Solanum sanctum.
Mahorta. See Oxyeanus.
Mahwa, HIND., Bassia latifolia.
Maida-lakri, HIND., Tetranthera monopetala.
Mai erikata, TEL., Celastrus paniculatus.
Mai-ji. See Chinchked.
Mailog. See Hill States.
Maimansing, i. 438.
Mai-nay, Shan-may, BURM., Indigofera tinctoria.
Main toverai, TAM., Cajanus Indicus.
Mai-oh, BURM., Calotropis gigantea.
Mairwara. Deserts, 920; Hindustan, 82; Meena.
Majallabah or Maglaba. See Babylonia.
Majnun, HIND., Lunatic, Inspired.
Majum. See Cannabis; Ganja; Hemp.
Majuphal, Maiphal, HIND., Galls.
Majzub, ARAB., Lunatic, Possessed.
Makadu, MAHR., Macacus radiatus.
Makal, LADAKH, Populus balsamifera.
Makhur limbo, MAHR., Atalantia monophylla.
Makka-cholum, TAM., Zea mays.
Makki, TAM., Gamboge.
Ma-koit, SIAM, Feronia elephantum.
Makshun-shim, BENG., Canavalia gladiata.
Makulu, SINGH., Hydnocarpus inebrians.
Makur, MAHR., Presbytis entellus.
Mal. See Dravidian.
Mala, BENG., Bryonia laciniosa.
Malaca, MALAY, Emblica officinalis.
Mala-erikata, TEL., Celastrus paniculatus.
Mal-ahcota, MAHR., TAM., Euphoria longana.
Malai konji maram, TAM., Cullenia excelsa.
Malai tangai, TAM., Sida acuta.
Ma-la-ka, BURM., Psidium pomiferum.
Ma-la-mai, BURM., Cardiospermum halicacabum.
Mal-ankura, BENG., Eleusine Indica.
Malati, Malur, MALAY, Jasminum.
Mala-trinakang, SANSK., Andropogon schoenanthus.
Malavelly. See Diamond.
Malay tovarai, TAM., Cajanus Indicus.
Mal burute, SINGH., Chloroxylon Swietenia.
Male—Paharia.
Male bamboo, Dendrocalamus strictus.
Maleo, Megacephalon rubripes.
Maler Kotla. See Cis-Sutlej.
Malidah, HIND. See Cloths.
Malikah, ARAB., Queen.
Malika jhanji, BENG., Aldrovanda vesiculosa.
Malik Din. See Afghanistan.
Malik-ibn-Abbas. See Imam.
Malizai. See Afghanistan.
Malkan guni, HIND., Celastrus paniculatus.
Mallaghai, TAM., Capsicum frutescens.
Mallai konc, TAM., Acrocarpus fraxinifolius.
Mallam toddali, MALEAL., Celtis orientalis.
Mallar. See Pallan.
Mallard, Anas boschas.
Malla vadu, TEL., Pariah.
Mallika, HIND., Jasminum.
Mal-patar, CAN., Serpent eagle.
Mal-sampra, NEPAL., Martes flavigula.
Maltilata, HIND., Gærtnera racemosa.
Malu-ramu chettu, TEL, Ægle marmelos.
Malvaregam, MALEAL., Atalantia monophylla.
Malwa. See Central India; Hindustan, 83.
Mamiran, Momira, HIND., Thalictrum foliolosum.
Mammalia. See Index, Appendix, vol. ii.
Mammea longifolia, Calysaccion longifolium.
Mamral, CHENAB. See Rhamneæ.
Manall kire, TAM., Giseckia pharnacioides.
Manapala, Tippatige, TEL., Tinospora cordifolia.
Manasarawara, or Tso Mapan. See Bindu-Saravara; Lakes.
Manat. See Al-lat.
Manawak, MAL. Iguana; Reptiles.
Mand, Mandal, Munrivi, Koda, HIND., Eleusine coracana.
Manda, Manga, TEL., Randia.
Manda-dup, BENG., Canarium strictum.
Manda motuku, TEL., Dalbergia Oojjainensis.
Mandap-pillu, TAM., Andropogon Martini.
Mandarins, Khiou-ping.
Mandata, TRANS-INDUS, Prunus Armeniaca.
Manda valli, TAM., Calonyction speciosum.
Mandif. See Rori Barolli; Pagoda.
Mandrong. See Fibres.
Manduka-bramhi, TEL., Clerodendron viscosum.
Maneioga, BURM., Carallia lucida.
Manceru, TEL., Celastrus paniculatus.
Manetho. See Chronology, 717.
Mangal. See Hill States.
Mangala-sutram. See Hindu, 69.
Mangerye. See Flores.
Manggi-manggi, MALAY, Rhizophora mangle.
Manghit. See Bokhara, 404.
Mang-ho-yu, CHIN., Naphtha.
Manginati maram, TAM., Bixa orellana.
Mangium album, Avicennia tomentosa.
Mangium caseolare, Sonneratia acida.
Mango ginger, Curcuma amada.
Mangolia. See Deserts, 92.
Mangus, HIND., MAHR., Herpestes.
Manilla-nut, Pea-nut, ENG., Arachis hypogea.
Manilla tamarind, Pithecolobium dulce.
Mani Mahes. See Dhaola Dhar.
Man in the Moon. See Jataka.
Mani-pasupu, TEL., Coscinium fenestratum.
Manjadi, TAM., Adenanthera pavonina.
Manjal, TAM., Turmeric.
Manja pavattay, TAM., Morinda citrifolia.
Manje konne, TAM., Cassia florida.
Manjella kua, MALEAL., Curcuma longa.
Manjil uppu, TAM., Tabashir.
Manjishta tige, TAM., Rubia cordifolia.
Manki. See Mundah.
Man kuchu, BENG., Colocasia Indica.
Manna-gona-gass, SINGH., Artocarpus lacoocha.
Mannan. See Mala Arayan.
Manneli, MALEAL., Indigofera aspalathoides.
Manoa-papoa, MALAY, Anona squamosa.
Manor, Mandar, RAVI, Acer cultratum.
Manor, MALAY, Jasminum.
Manouria emys, Tortoise, Reptiles.
Manseni kotta, TEL., Adenanthera pavonina.
Mans Khel, KASHMIR, Agaricus campestris.
Mantapa. See Architecture, 143.
Mantawi. See Archipelago, 137.
Mant-bek, CAN., Felis chaus.
Man-ti, CHIN., Rehmannia Chinensis.
Mantis tricolor. See Coffee Planting, 775; Insects.
Man-to-loh, CHIN., Erythrina Indica.
Mantram, SANSK., Charms.
Man tylum, TAM., Naphtha.
Manuk devata, JAV., Bird of Paradise.
Manu pilli, TEL., Paradoxurus musanga.
Manu potu, TEL., Portax pictus.
Manuvak, MALAY, Iguana.
Manu valli gadda, TEL., Janipha manihot.
Manwantara. See Chronology, 717.
Man-yuen, CHIN., Rehmannia Chinensis.
Maqal, HIND., Citrullus colocynthis.
Maqeer, MAHR., Udina wodier.
Maradu chettu, TEL., Ægle marmelos.
Maral, PERS., Cervus Wallichii.
Maram-pilli, MALEAL., Paradoxurus.
Mara munjil, TAM., Coscinium fenestratum.
Mara narulle, CAN., Jatropha curcas.
Maranta Malaccensis, Alpinia Malaccensis.
Marantatti, TAM., Hydnocarpus alpinus.
Marati mogga, TEL., Illicium anisatum.
Ma-ratmal, SINGH., Rhododendron.
Mara valli kelangu, TAM., Janipha manihot.
Maravi, CAN., Portax pictus.
Maray manga, TAM., Protium caudatum.
Mar-chobeh, PERS., Asparagus officinalis, Staphylea emodi.
Mardak, HIND., Carrissa diffusa.
Mardoo, HIND. See Armour, 162.
Mareotis Lake. See Lakes.
Mar-ghat, HIND. See Chiwana; Hindu Cremation Place.
Mar Grigorius. See Abul Faragh.
Maricha, Gol-mirch, BENG., Piper nigrum.
Maridu, TEL., Crataeva nurvala.
Marignia acutifolia, Canarium nigrum.

Marike malle, TEL., Olax scandens.
Marjan, HIND., Coral.
Marjoram, ENG., Origanum normale.
Markal, ARAB. See Boat.
Markhor, HIND., Capra megaceros.
Marking-nut tree, ENG., Semecarpus anacardium.
Marmot, Arctomys bobac, A. hemachalanus.
Maronites. See Lebanon.
Maror-phalli, HIND., Helicteres isora, Isora corylifolia.
Marpani. See Afghanistan.
Marra vattay, TAM., Hydnocarpus inebrians.
Marriage. See Borneo; Burma; Curao; Hindu, 66, 68; Karao; Khurnk'h; Nikah; Oraon; Panwar-shadi.
Marrubium Indicum, BURM., Anisomelis ovata.
Marrubium odoratissimum. See Pacha-pat.
Mars—Kartikeya.
Marsh-mallow, Malva sylvestris.
Marsupialia. See Archipelago, 139.
Martens. See Mustelidæ.
Martins, *sp.* of Cotyle, Chelidon.
Marttand, Kashmir, Architecture, 146.
Marudani, TAM., Lawsonia inermis.
Maruk, MAHR., Ailantus excelsus.
Marul, Murle, HIND., Sanseviera Zeylanica.
Marumakatayam. See Aka Podwal; Polyandry.
Marusthali. See Desert.
Marut. See Harut.
Marvel of Peru, Mirabilis jalapa.
Marwa, HIND., Marjorana hortensis.
Marwar. See Hindustan, 80; Rajputana.
Masang, PERS., Lathyrus sativus.
Mashad, Imam Raza, Husain, Karbala.
Mashiputri, TAM., Grangea maderaspatana.
Mashk billi, HIND., Viverra, *sp.*
Masnavi. See Sufi.
Massalat-ul-Firaün, Cleopatra's pillar.
Massandari, BENG., Callicarpa.
Massicot, Oxide of lead.
Massur, Mauri, GUJ., HIND., Ervum lens.
Mastika, ARAB., Pistacia.
Mastika, MALAY, Amulets, Charms.
Masudi. See Abu-l-Hasan; Al Masudi.
Mat, Mash, Moth, HIND., Phaseolus.
Mater Montana, Parvati.
Matha-Din. Hindu, 72.
Mat-ki-bhaji, DUKH., HIND., Amarantus tristis.
Matricaria oleracea, Chrysanthemum Roxburghii.
Ma-tsien-tsze, CHIN., Nux vomica.
Matsya, Fish avatar. See Avatar.
Mattam, TAM., Monastery.
Mattar, Chural, HIND., Lathyrus sativus.
Matti, BEAS, Orthanthera viminea.
Matt-ki-phalli, DUKH., HIND., Cyamopsis psoraloides.
Mattu bachchali, TEL., Spinacia tetrandra.
Mauas. See Bactria, 223.
Mau-cha, CHIN., Crataegus pinnatifida.
Mauri Canwai River, Canals, i. 564.
Mauriya dynasty. See Bharata; Chandragupta.
Mau-tau, CHIN., Soja hispida.
Mau-tsz, Chin., Diospyros tomentosa.
Mauz, ARAB., Musa; Plantain.
Mavalinga maram, TAM., Caillea cinerea, Cratæva Roxburghii.
Maya, BENG., Cervulus aureus.
Mayah Sailah, ARAB., Liquid storax.
Mayna, HIND., Vangueria spinosa.
Mayuri, HIND., Fennel seed.
Ma-za-lee, BURM., Cassia Sumatrana.
Mazer wood tree, Isonandra acuminata.
Mazhab, HIND. See Creed.
Mazina of Bokhara, Gypsy.
Mazrium, Adada, ARAB., Daphne mezereum.
Measle. See Bladder Worm.
Med, Indo-Scythæ.
Meda-sak, SUTLEJ, Tetranthera Roxburghii.
Medha, SANSK., to kill, to sacrifice. See Aswa Medha; Gao Medha.
Medicago, Clover.
Medusa. See Phosphorescence.
Megacephalon rúbripes. See Celebes.
Megadermatinæ. See Cheiroptera; Vampyridæ.
Megapodidæ. See Birds, 368.
Megaptera. See Cetacea; Whales.
Meh-tsau-rh, CHIN., Diospyros lotus.
Mei-kong, or Cambodia River. See Rivers.
Melan kua, MALEAL., Kaempfera rotunda.
Meleacea Wightiana, Amoora rohituka.
Melotta venenosa. See Clupeonia.
Melilotus. See Bokhara, 405.
Meloe. See Beetles; Mylabris.
Menado. See Celebes, 616.
Menander. See Bactria, 222; Peshawur.
Menankabau. See Johore.
Mendicants. See Alms; Atit; Parivrajaka.
Mendoni, MALEAL., Gloriosa superba.
Menispermum cocculus, Anamirta cocculus.
Menispermum fenestratum, Coscinium fenestratum.
Menispermum glabrum, Tinospora cordifolia.
Menispermum peltatum, Cyclea Burmanni.
Menispermum villosus, Cocculus villosus.
Mentha piperita, Peppermint.
Menti kura, Mentual, TEL., Trigonella fœnum græcum.
Menyanthes cristata, Villarsia, *sp.*
Menyanthes nymphoides, the leaves and flowers are kept in Japan steeped in brine, and used for salad, in the same manner as pickled cucumbers.
Mera. See Parvati.
Mera Bai. See Hindus, 62.
Merchant races. See Commerce, 745.
Merlin, Hypotriorchis œsalon and H. chicquera.
Mermaid. See Dugong.
Merodach. See Babylonia, 218.
Meropogon Forsteni. See Cittura.
Meru Mah of the Ghats, Rusa Aristotelis.
Merv. See Central Asia; Karakum.
Mesha Ayana. See Ayana.
Meshila-i-Rustum, the Aria Palus.
Mespilus Japonicus, Eriobotrya Japonica.
Mesta pat, Nalki, BENG., Hibiscus cannabinus, H. subdariffa.
Metempsychosis of Tibetans. See Buddhism, i. 497.
Methana, Koch'hi, Gavæus frontalis.
Methel seed, Datura fastuosa.
Methi, HIND., Trigonella fœnum-græcum.
Metta tamara, TEL., Cassia alata.
Metta-yelka, TEL., Golunda meltada.
Mewar. See Hindustan, 80; Rajputana.
Meyerina claviformis, Venus flower-basket.
Meynia spinosa, Vangueria spinosa.
Mezeng. See Jughi.
Mhains, HIND., Buffalo.
Mhairs, i. 449.
Mhang, MAHR., Leather-workers, Chamar.
M'hor-angi, HIND., Nisactus bonelli.
Mhow—Indore.
Mialim-ma, SIKKIM, Urtica crenulata.
Miana, Kathiawar.
Mia-sailah, ARAB., Liquidambar.
Michael. See Archangel.
Microcos paniculata, Grewia microcos.
Microrhynchus sarmentosus, Sand-binding plants.
Midak-tanah, MALAY, Bitumen.
Midde-kire, TAM., Asystasia Coromandeliana.
Midnapur Canal, i. 563.
Mihr, ARAB. See Sun-worship.
Mih-tsau, Nan-tsau, CHIN., Jujube tree.
Mik-ke-thu, BURM., Andropogon schoenanthus.
Mildews. See Fungus.
Milfoil, Achillea millefolium.
Milkmaid's cave, i. 611.
Millanowe race. See Borneo.
Millingtonia hortensis, Bignonia.
Milnea apiocarpa, Aglaia Roxburghiana.
Milvus rotundicaudus, Haliastur Indus.
Mimansa. See Darsana.
Mimos—Yama.
Mimosa. See Acacia; Albizza.
Mimosa abstergens, Acacia rugata.
Mimosa bigemina, Inga bigemina.
Mimosa cinerea, Dichrostachys cinerea.
Mimosa dulcis, Pithecolobium dulce.
Mimosa fera, Gleditschia Sinensis.
Mimosa pedunculata, Parkia biglandulosa.
Mimosa saponaria, Acacia rugata.
Mimosa scandens, Entada pursætha.
Mimosa xylocarpa, Xylia dolabriformis.
Minachi—Parvati.
Minahassa. See Celebes.
Minakar, HIND. See Colours; Enamel.
Minaktanah, MALAY, Naphtha.
Min amber, TAM., Ambergris.
Minan, Kamayan, MALAY, Frankincense.
Min chenney, TAM., Fish roe.
Mindanao. See Archipelago, 136.
Mindoro. See Philippines.
Mindra. See Rori Barolli.
Mindrai, HIND., Colocasia.
Mingula Tholt—Literature.
Minivets, *sp.* of Pericrocotus.
Mintira. See Binua; Gunong.
Mirapa-kai, TEL., Capsicum.
Mirapa kandra, TIB., Toddalia aculeata.
Mirasi Langha.
Mirch, HIND., Capsicum, Pepper.
Mirdah. See Dhangar.
Mirga, HIND., Antilope bezoartica.

Mirialu, Moluvu kodi, TEL., Piper nigrum.
Mirzan-josh, ARAB., HIND., Origanum normale.
Mishmi. See Kolita.
Mishmish, PERS., Armeniaca vulgaris.
Mishmi teeta, ASSAM., Coptis teeta.
Missel thrush, Turdus Hodgsoni.
Mistletoe, Viscum album.
Mitha nimbu, HIND., Sweet lime.
Mitha til, HIND., Sesamum, Gingelly.
Mitha titia, BENG., Aconitum ferox.
Mitha zahr, Mahoor, HIND., Aconitum ferox.
Mithi-lakri, DUKH., Glycyrrhiza glabra.
Mithun, HIND., Gavæus frontalis.
Mitra. See Mihr; Sun-worship.
Mittunkote. See Indus.
Miumel-nerupa, TAM., Ammannia vesicatoria.
Moch-louka (fish snatcher), HIND., Sterninæ.
Mocking-bird, Paradise fly-catcher.
Modera kanni, MALEAL., Hugonia mystax.
Modira Walli? Artabotrys odoratissimus.
Moduga, TEL., Erythrina tuberosa.
Moga biraku, TAM., Anisomeles Malabarica.
Mogagerri vembu, TAM., Bischoffia Javanica.
Mohakri, HIND., Bryonia umbellata.
Mohil. See Rajputs.
Mohini. See Ayana.
Mohi-ud-Din-ibn-ul-Arabiya-ul-Maghrabi. See Sufi.
Mohr. See Deserts, 920.
Mohr, Mor, HIND., Pavoninæ, Peacock.
Mohr-ungi, HIND., Nisaetus bonelli.
Mohsin Fani, Author of Dabistan.
Mohurbunj. See Rajputs.
Mokanna. See Hashim-bin-Hakim.
Mokhal, Paskhu, CHEN., Populus nigra.
Mokka, BENG., Zea mays.
Moksha, CHENAB, Agaricus campestris.
Molago valli, TAM., Piper nigrum.
Mole cricket. See Coffee Planting, 776; Insects.
Mole rats, *sp.* of Nesokia Indica, N. Hardwickei.
Moles, *sp.* of the family Talpidæ.
Molinæa canescens, Cupania canescens, Hemigyrosa canescens.
Mollagu, Mollaghai, TAM., Capsicum annuum.
Momand. See Afghanistan.
Momay. See Hot Springs, 114.
Momiai, PERS., Asphalte.
Momordica monadelpha, Coccinea Indica.
Monasteries, Vihara, Mattam.
Monastery caves. See Cave Temples, 610.
Monaul pheasant, Lophophorus impeyanus. See Birds; Pheasant.
Monghir. See Hot Springs, 113.
Mongol, TIB. See China; Koriat; Lakes.
Monitor flavescens, Empagusia flavescens.
Monk, Pheongyee, Talapoin.
Monkey bread tree, Adansonia digitata.
Monkeys. See Mammalia; Semiadæ.
Monkshood, Aconitum napellus.
Monniera Brownei, Herpestris monniera.
Monukka, Kismis, HIND., Raisins.
Moochwal. See Abrah.
Moodra-dharanum. See Chuckranketum.
Moon flower. Colonyction grandiflorum.
Moongnee stone. See Chlorite.
Mora, SINGH., Euphoria longana.
Morsea Chinensis, Pardanthus Chinensis.
Morsœda, Mowda, TAM., Buchanania latifolia.
Morali chettu, TEL., Sponia orientalis.
Moratti, MALEAL., Hydnocarpus inebrians.
Mordecai. See Esther.
Morel, Morchella. See Fungus; Mushroom; Phaphor.
Mori dynasty. See Maurya; Pramara; Sehesnag.
Mori of Sylhet, Euonymus garciniifolia.
Moriel. See Clematidæ.
Morkantee, BENG., Acalypha Indica.
Morkot, Banur, BENG., Papioninæ.
Morr, ARAB., Balsamodendron myrrha.
Mortuth, Nila-tutiah, HIND., Bluestone.
Morunga noona, TEL., Ben-nut-oil.
Mosaic work. See Arts; Jewellery.
Mosallyon of the Periplus, the modern Berbereh.
Moschus memimna, Memimna Indica. See Cervidæ; Mammalia.
Mosques. See Architecture, 149.
Mota kurmal, MAHR., Dillenia speciosa.
Mount Maleus, Orissa.
Mountain ash, Pyrus aucuparia.
Mountain ranges of British India, i. 449.
Moura-bikh, PANJ., Aconitum ferox.
Mouse deer, Memimna Indica.
Mous, HIND., Banana. Musa.
Mru. See Burma, i. 526.
Mu-alu, BENG., HIND., Dioscorea aculeata.
Muasi. See Kur.
Muavia. See Imam.
Mubarkha, HIND., Adiantum capillus veneris.
Much-kuchiya, BENG., Papyrus tegetiformis.
Mudang, BURM., Cycas circinalis.
Mudda doop, CAN., Ailantus Malabaricus.
Mudhuya, HIND., Polioætus ichthyœtus.
Mududa, TAM., Chloroxylon Swieteenia.
Mueller, Baron Ferdinand von. See Botany, 422.
Muen-phal ka-jhar, HIND., Randia, *sp.*
Mugil cephalotus, Isinglass.
Muh-hiang, CHIN., Aucklandia costus.
Muh-kin, CHIN., Hibiscus Syriacus.
Muh-mien, CHIN., Bombax ceiba.
Muh-rh, CHIN., Fungus.
Muh-tan, CHIN., Gardenia radicans.
Muh-tung, CHIN., Clematis vitalba.
Muin-ud-Din—Kader Wali.
Mu-i-shutr, PERS., Camel's hair.
Mukaratay kiray, TAM., Boerhaavia erecta.
Mukka juari, DUKH., Zea mays.
Mukkavan, Slave.
Mukki-tylum, TAM., Gamboge butter. See Oils.
Mukku mungera, TEL., Asystasia Coromandeliana.
Mukto-joori, BENG., Acalypha Indica.
Mukto-pati, BENG., Maranta dichotoma.
Mukul, HIND., Balsamodendron.
Mukuru karra, TEL., Cordia myxa.
Mulagu, TAM., TEL., Pepper, Capsicum.
Mul elava, MALEAL., Salmalia Malabarica.
Mullah Shah. See Sufi.
Mulla muste, TEL., Solanum trilobatum.
Mulla vengay, TAM., Bridelia spinosa.
Mullu dosa kaia, TEL., Cucumis momordica.
Mullu moduga, TEL., Erythrina sublobata.
Mullu pendalam, TEL., Dioscorea pentaphylla.
Multan canals. See Canals; Kasyapura.
Mulu goranta, TEL., Amarantus spinosus.
Muluka rasari, TAM., Eumeta Cramerii.
Mulu veleri, TAM., Cucumis sativus.
Mumani, TRANS-INDUS, Sageretia Brandrethiana.
Mundate. See Cis-Sutlej.
Mundah Kol. See Kol; Oraon; Sun-worship.
Mundasa. See Clothing, 748.
Mánda valli, MALEAL., Calonyction grandiflorum.
Mundi, DUKH., SANSK., Sphæranthus hirtus.
Mundiri maram, TAM., Anacardium occidentale.
Mundium wool. See Blanket.
Mundla-aru, PERS., Amygdalus Persica.
Munduka purni, SANSK., Hydrocotyle Asiatica.
Mung, MAHR., Phaseolus mungo.
Munga, Michi—Bombyces.
Munga, HIND., Coral.
Mung-phalli, BENG., Arachis hypogea.
Muni, Motaga, TAM., Erythrina suberosa.
Munia, *sp.* of the Estreldinæ.
Munia fibre, SIND, Amphidonax karka.
Munja. See Panicaceæ.
Munja Coopum—Cuddalore.
Munnæ-kiray, TAM., Premna serratifolia.
Munnikarn. See Hot Springs, 112.
Muntafiyah, an Arab ship.
Munta gajjanamu, TEL., Ichnocarpus frutescens.
Munta mamidi, TEL., Anacardium occidentale.
Muntjak, HIND., Cervus muntjac.
Muntjak, Cervulus aureus.
Munudna-muddu, TEL., Desmodium triflorum.
Muranghai ver, TAM., Horse-radish tree.
Murdar sang, HIND., Oxide of lead.
Muree, BENG., Feniculum panmori.
Murghab—Central Asia.
Murghkes, HIND., Celosia argentea.
Murr, ARAB., Myrrh.
Murrel, ENG., Ophiocephalidæ.
Murtoo, BENG., Salvia Bengalensis.
Murukka, TAM., Erythrina Indica.
Murupindi, TEL., Acalypha Indica.
Murut. See Borneo; Idaan.
Muruta, SINGH., Lagerstrœmia reginæ.
Murvi. See Bhownagar.
Murwa, HIND., Wormwood.
Musabbar, Pikros, ARAB., Aloes.

Musadi, Mushti, TEL., Strychnos nux vomica.
Musa Khel. See Afghanistan.
Musanagar. See Ollisobora.
Mushajjar Rusiya, Russian satin, flowered or figured satin.
Mushk billi, HIND., Viverridæ.
Mushroom. See Agaricaceæ; Fungi.
Musiris. See Commerce, 789.
Musizai. See Afghanistan.
Musk deer, Moschus moschiferus.
Muskei, Kantalu, CHENAB, Hamiltonia suaveolens.
Musk-mallow, ENG., Abelmoschus moschatus.
Musk rats, *sp.* of Sorex, Soriculus, Tupaia, Ondatra Americana.
Musli safed, SUTLEJ, Asparagus filicinus.
Mussambram, TEL., Aloes.
Mussumbra, SINGH., Ambergris.
Mustaka, Motho, DUTCH, Cyperus hexastachyus.
Mustaru, Gund-mar, HIND., Artemisia.
Mustaru, TEL., Grangea maderaspatana.
Mustung, Valley in Baluchistan.
Mutawali. See Lebanon.
Muthu, BENG., HIND., Cyperus hexastachyus.
Mutricunjayvi, TAM., Asarum Europæum.
Muttava-pulagam, TEL., Pavonia odorata.
Mutti, Karai mutti, CAN., Terminalia tomentosa.
Mutti pal, TAM., Ailantus Malabaricus.
Muttura, Muttranja, BENG., Callicarpa.
Mutur, Khandu, HIND., Pisum sativum.
Muvi, Muvvi, TEL., Alphonsea lutea.
Muyu, CHIN., the tallow of Stillingia sebifera.
Muyyaku ponna, TEL., Smithia sensitiva.
Mya-byeet, BURM., Portulaca oleracea.
Myæ-bai, BURM., Arachis hypogea.
Myæ-bau-touk, BURM., Kaempfera rotunda.
Myamma, the Burmese people.
Myat law nee, BURM., Quamoclit.
Myat-læ, BURM., Jasminum.
Myat ya, BURM., Grewia floribunda.
Myos Hormos. See Arsenoe.
Myouk kyeing, BURM., Flacourtia sepiaria, Flagellaria Indica.
Myouk lok, BURM., Artocarpus lacoocha.
Myouk nee, BURM., Dioscorea atropurpurea.
Myouk-phoo, BURM., Dioscorea alata.
Myristica Horsfieldii, Pyrrhosia Horsfieldii.
Myrmicedæ. See Ants; Ponoridæ.
Myrobalan, Terminalia bellerica.
Myrobalanus emblica, Emblica officinalis.
Myrtus caryophyllus, Eugenia caryophyllata.
Myrtus pimenta, Pimenta officinalis.

N

NAAKMEEN, TAM., Pleuronectes solea.
Nabha. See Cis-Sutlej.
Nadiya. See Triveni.
Nadoli, HIND., Amulets, Charms.
Naduong gass, SINGH., Dalbergia Mooniana, Pericopsis Mooniana.
Nafel, ARAB., Galbanum officinale.
Naga. See Cobra.
Naga, or Takshak, Snake race, Kachar.
Naga dynasty—Kashmir.
Nagabansa, or Serpent race. See Tak.
Naga-kali, TAM., Cactus Indicus.
Naga-mughatei, TAM., Calonyction grandiflorum.
Naga mulli, TAM., Rhinacanthus communis.
Naga musadi, TEL., Strychnos colubrina.
Naga-rama-katti, TEL., Calonyction grandiflorum.
Nagarjuni. See Burabur Hills.
Naga suganda, SANSK., Ophiorhiza mungos.
Nag-champa, MAHR., Mesua Roxburghii.
Nagd, Sicca, HIND., Coins.
Nagdowna, HIND., Artemisia.
Nag-downa of Bombay, Crinum Asiaticum.
Nagee, BURM., Pterospermum acerifolium.
Nageia putranjiva, Putranjiva Roxburghii.
Nagesar. See Kisan.
Nagkesar, HIND., Mesua Roxburghii.
Nagor mootha, HIND., Cyperus hexastachyus.
Nag-patta, Turbad, HIND., Ipomœa turpethum.
Nag-phani, BENG., Cactus Indicus.
Nagpur. See Central Provinces.
Nahan. See Hill States.
Nahavend. See Persia.
Nahi kuddaghu, TAM., Polanisia.
Naiades. See Jumna.
Nai kaduga, Nai vella, Gynandropsis pentaphylla.
Naikra, Panch-Mahal.
Naiso gata, JAPAN. See Cetacea.
Nai-uruvi, TAM., Achyranthes aspera.
Naizai. See Afghanistan.
Naka put, TEL., Rostellaria procumbens.
Nak chilni, DUKH., Epicarpus orientalis.
Nakdoun, HIND., Asparagus officinalis.
Nakhonwat. See Architecture, 147.
Nakhud, PANJ., Cicer arietinum.
Nakka, TEL., Jackal.
Nakka-ronu, TEL., Artocarpus lacoocha.
Nakshatra. See Panchanga.
Naksh-i-Rustum. See Cuneiform.
Nakshi-telia, HIND., Sturnus vulgaris.
Nakuli, Sarpakshi, TEL., Ophiorhiza mungos.
Nal, Nul, Darma, BENG., Amphidonax karka.
Nalagarh. See Hill States.
Nalla kupi, TEL., Clerodendron inerme.
Nalla mada chettu, TEL., Avicennia tomentosa.
Nallani padmam, TEL., Euryale ferox.
Nalla regu, TEL., Albizzia amara.
Nalla-tadi gadda, TEL., Curculigo orchioides.
Nalla tiga, TEL., Ichnocarpus frutescens.
Nalla tumma, TEL., Acacia Arabica.
Nalla ulemara wood, Diospyros chloroxylon.
Nalla-vavali, TEL., Gendarussa vulgaris.
Nalleru, TEL., Vitis quadrangularis.
Nalwa bakshi, HIND., Serratula anthelmintica.
Nama dampa, TEL., Aponogeton monostachyon.
Nama Karanam. See Hindu, 65.
Namas Karam—Hindu, 70.
Nam-nam, MALAY, Cynometra ramiflora.
Namtso. See Lakes; Yunam.
Nan, CHIN., Aucklandia costus.
Nanda. See Vararuchi.
Nanda dynasty. See Bharata.
Nang, PANJ., Cornus macrophylla.
Nang-ka, MALAY? Artocarpus incisus.
Nani. See Hinglaz, 85.
Nanjunda maram, TAM., Balanites Ægyptiaca.
Nankhah, PERS., Ptychotis ajowan.
Nankuchiya. See Lakes.
Nan-mah, CHIN., a cypress.
Nannul. See Andi; Pavananti; Pulavar.
Nan-tar-ok, Tu-yok, BURM., Liquid-ambar.
Nar, TAM., Cordage.
Nara, HIND., a cradle bridge of the Jhelum.
Naraga maram, TAM., Ehretia ovalifolia.
Nara mamidi, TEL., Tetranthera monopetala.
Narampoo chalandi, HIND., Guinea-worm.
Narankot. See Patala.
Narapati. See Warangal.
Narasingh, Man-lion avatar. See Avatar.
Narden, Nardos, GR., Spikenard.
Naregar, TEL., Eugenia jambolana.
Narel, HIND., Cocoanut.
Nargal, Ringal, BEAS, Arundinaria falcata.
Narra. See Canals, i. 562.
Naru, HIND., Guinea-worm.
Narui. See Brahui.
Naruvalli, TAM., Cordia angustifolia.
Narvala, TAM., Cratæva Roxburghii.
Na-sa-phiu, BURM., Pterocarpus santalinus.
Nashtar, Nakhtar, PANJ., Pinus, *sp.*
Nasik. See Cave Temples, 611.
Naspati, HIND., Pyrus communis.
Nasurjangi, DUKH., Trianthema obcordatum.
Nasut, Niswut, HIND., Ipomœa turpethum.
Native companion. See Crane.
Native States. See British India; Hindustan, 80.
Natr-alu, Ratn-alu, HIND., Batatas edulis.
Natsao, TEL., Utricularia fasciculata.
Nature-worship. See Indra.
Naucrates ductor, the pilot fish.
Nava Khanda. See Vararuchi.
Navanagar. See Bhownagar.
Navasaram, TAM., TEL., Ammonia, hydrochlorate of.
Naw, SINGH., Iron-wood.
Nawal, Nawar, TAM., Eugenia jambolana.
Nawa-ratna. See Vikramaditya.
Nawel busi cragu, TEL., Vitex arborea.
Nawir, Neur, Lewar, PANJ., Cupressus torulosa.
Nazai, a clan of the Povindah Afghans.
Nebo, CHALD., the planet Mercury.
Nechatty kalangu, TAM., Isoetes Coromandeliana.
Necrophori, Sexton beetles.
Nectariniдæ—Honey-suckers.
Negalya ponya, NEPAL., Ailurus fulgens.
Negri Sembilan, Malay Peninsula.
Negumbo devil, Manis brachyura, a large scale-covered quadruped,

held in superstitious dread by the Singhalese.
Neilgherry nettle, Eng., Girardinia Leschenaultiana.
Nekota, Tam., Hemigyrosa canescens.
Nela jidi, Tam., Marking-nut.
Nela kobbari, Tel., Ionidium suffruticosum.
Nelam-pala, Malbal., Wrightia tomentosa.
Nela pippali, Tel., Zapania nodiflora.
Nelapoona, Tam., Cassia lanceolata.
Nela tangedu, Cassia obtusa.
Nela vemu, Kari vemu, Tel., Andrographis paniculata.
Nella balsu, Tam., Tel., Canthium didymum.
Nella-gedha, Tam., Aquila nævia.
Nellaguli, Golimidi, Tel., Cicendia hyssopifolia.
Nella gulisienda, Tel., Cardiospermum halicacabum.
Nella manthi, Mal., Inuus silenus.
Nelli, Malbal., Cicca disticha, Emblica officinalis.
Nelloo, Singh., *sp.* of Strobilanthus.
Nemedra Nimmonii, Amoora Lawii.
Nemi, a title of Chaitanya.
Nemmi chottu, Tel., Dalbergia Oojjainensis.
Nemorrhœdus. See Bovidæ; Mammalia.
Neomeris. See Delphinidæ.
Neophron percnopterus, Vulture.
Neoza, Hind., Pinus, *sp.*
Nepalam, Tel., Croton tiglium.
Nepeta Malabarica, Anisomeles Malabarica.
Nephelium fuscatum, Glenniea Zeylanica.
Nephelium longanum, Euphoria longana.
Neredu manu, Tam., Eugenia caryophyllifolia.
Nergundi, Beng., Vitex negundo.
Nerium antidysentericum, Wrightia antidysenterica.
Nerium grandiflorum, Cryptostegia grandiflora.
Nervalam, Tam., Croton tiglium.
Nestorian Christians. See Chaldee; Cochin.
Netavil maram, Tam., Antiaris innoxia.
Netherland India. See Dutch.
Nettle tree, Celtis, *sp.*
Newal, Newara, Hind., Herpestes, *sp.*
New Year's day, Parsee, Pappati.
Neyadassee-gass, Singh., Eurya Japonica.
Ngai, Ki ngai, Chin., Artemisia.
Ngan-sih-hiang, Chin., Benjamin.
Nga thin-gyee, Burm., Ficus cordifolia.
Ngyanlo, also Kio-lo, Sukhavati.
Niala nemiki, Tel., Syphœotides auritus, Floriken.
Nia musli, Hind., Curculigo orchioides.
Nibong, Malay, Caryota urens.
Nibu, Beng., Citrus bergamia.
Nicæa. See Bactria, 222.
Niccompa. See Rajputs.
Nift-i-rumi, Pers., Bitumen.
Nigala, Ringal, Panj., Arundinaria utilis.
Niggi, Tulsuni, Ravi, Hamiltonia suaveolens.
Nightingale, Philomela luscinia.
Night jars, *sp.* of Caprimulgus.
Nil, Hind., Indigofera tinctoria.
Nila cobeya, Singh., Chalcophaps Indicus.
Nilakanta, Siva, literally blue throated.
Nilakil, Nilkanth, Hind., Gentiana kurroo.
Nilam, Hind., Malay, Tam., Sapphire.
Nila nirganda, Sansk., Gendarussa vulgaris.
Nila-tar, Hind., Cuscuta reflexa.
Nilaveri, Tam., Cassia lanceolata.
Nil bandar, Beng., Inuus silenus, Papioninæ.
Nil-gai, Portax pictus.
Nilika-mara, Can., Emblica officinalis.
Nil-kalmi, Beng., Pharbitis nil.
Nilloo, Singh., *sp.* of Strobilanthus, a genus of the Acanthaceæ. They are the favourite food of the elephant; they grow in thick sheaves, with slender, weak stems, to a height of 15 to 20 feet, with handsome spikes of flowers at the top.
Nillur, Paat, Dukh., Cissus quadrangularis.
Nil-naray, Tam., Bustard.
Nilofar, Pers., Nelumbium speciosum.
Niluparajita, Beng., Clitoria ternatea.
Nim, Hind., Azadirachta Indica.
Nimba. See Cloths.
Nimbar, Jand, Panj., Acacia leucophlœa.
Nimi. See Ikshwacu.
Nimili, Tel. See Pavoninæ.
Nimma-chettu, Tel., Citrus bergamia.
Nine gems. See Vararuchi; Vikramaditya.
Nineveh. See Burial Customs; Chaldæa, 517.
Ning-mung, Chin., Lemon.
Niota pentapetala, Samadera Indica.
Nipera, Kittul, Singh., Caryota urens.
Nipur. See Babylonia.
Nira-dhar, Guj., Cuscuta reflexa.
Nir batsala, Tel., Jussieua repens.
Nirbisi, Dukh., Curcuma zedoaria.
Nirei puti, Tam., Rostellaria procumbens.
Nirgunda, Dukh., Vitex trifolia.
Nirija neradi, Tel., Elæodendron Roxburghii.
Nirmul, Nirmuli, Hind., Strychnos potatorum.
Nir-mulli, Tam., Asteracantha longifolia.
Nir-nai, Can., Lutra nair.
Nir-pirimi, Tam., Herpestris monniera.
Niru aghindra paku, Tel., Jussieua villosa.
Niru kussuvu, Tel., Commelyna communis.
Nir vinoki, Tel., Damasonium Indicum.
Nisactus. See Aquila; Birds; Eagle.
Nityananda. See Khurdha.
Nizam-ud-Din-Aulia. See Muhammadanism.
Nizam-ul-Mulk. See Hyderabad; Karmati.
Noctilionidæ, Cheiroptera.
Noctilucæ. See Phosphorescence.
Noddy, Anous stolidus, A. tenuirostris.
Nolika chettu, Tel., Pterospermum suberifolium.
Noli tali maram, Tam., Antedesma bunias.
Non-t'-yek, Burm., Rose maloes.
Nooee of Nepal, Euonymus garciniifolia.
Norfolk Island grass, Freycenetia.
Norfolk Island pine, Araucaria excelsa.
Nori-nori, Jap., Hydrangea paniculata.
Norne of Tavoy, Castanea Martabanica.
Novgorod. See Commerce, 789.
Nowanagar. See Feudatory.
Nowsadur, Sansk., Sal ammoniac.
Nubians, in Africa estimated at one and a half million.
Nubra. See Chorbat; Hot Springs, 111, 112.
Nubtee, Kharnob, Arab., Ceratonia siliqua.
Nuch, Hanuz, Jhelum, Fraxinus xanthoxylloides.
Nu-ching, Chin., Rhus succedanea.
Nudibranch. See Bornella digitata.
Nuga gass, Singh., Ficus laccifera.
Nugu chikkadu, Tel., Dolichos glutinosus.
Nugu tumma, Tel., Acacia Farnesiana.
Nukkeru, Tel., Cordia angustifolia.
Nul, Nultura, Hind., Arundo karka.
Nuliti, Syamali, Tel., Isora corylifolia.
Nulleru tige, Tel., Cissus quadrangularis.
Nulshima, Nep., Ehretia serrata.
Nulu tiga, Pachi tige.
Numenius, the Curlew. See Scolopacidæ.
Numida meleagris, Guinea-fowl.
Nuna maram, Tam., Morinda citrifolia.
Nunec, Burm., Gavæus frontalis.
Nung-sha, Nou-sha, Chin., Sal ammoniac.
Nuniya, Beng., Portulaca quadrifida.
Nunnarivayr, Tam., Sarsaparilla.
Nunya, Salt makers of Bengal.
Nuputki, Beng., Cardiospermum halicacabum.
Nuran kelungu, Tam., Dioscorea pentaphylla.
Nuri, Nubari, Beng., Cicca disticha.
Nurrey pithen kiray, Tam., Rothia trifoliata.
Nurri vungajum, Tam., Scilla Coromandeliana.
Nur Zae. See Afghanistan.
Nushki, Desert district of Baluchistan.
Nut-crackers, *sp.* of Nucifraga.
Nuthach, Sitta, *sp.*, Dendrophila.
Nutha-cootee-nari, Tam., Leptoptilos Javanica.
Nuthrin haran, Hind., Hog-deer.
Nuti, Hind., *sp.* of Amarantus.
Nut-siragum, Tam., Cumin seed.
Nutti churi, Tam., Spermacoce hispida.
Nuvu, Nuvulu, Tel., Sesamum Indicum.
Nway-ka-zwoon a phyoo, Burm., Calonyction Roxburghii.
Nyadi—Vararuchi.
Nyaya. See Darsana; Sankhya.
Nyctanthes hirsuta, Guettarda speciosa.
Nycticorax. See Heron.
Nyctinomus, Cheiroptera.
Nymphæa stellata, Euryale ferox.
Ny-oung-gyat, Burm., Ficus cordifolia.
Nyul, Hind., Herpestes, *sp.*

O

Oadal, a creeper in Kumaon with fine strong fibres.

Oak-an, BURM., a tree of Moulmein. Wood made into canoes.
Oan-naih, BURM., a tree of Moulmein, used for house-building.
Oaracta or Verokhta. See Kishm.
Oasis of Siwah. See Jupiter Ammon.
Oats, wild, Avena fatua.
Ob, a serpent, for Obi-women, Obion, Oboth, and Oub. See Serpent-worship.
Obaid, a powerful ancient Bedouin tribe near Mosul.
Obal, HIND., Fagopyrum emarginatum.
Obalampully, a diamond site. See Diamond.
Oban, a gold coin of Japan, worth about £4, 2s.
Obar, HIND., also Kotaha, land dependent on rain for irrigation, same as Barani.
Obara, HIND., Houbara Macqueenii, Bustards.
Obchi, HIND., a howitzer gun.
Obelisks. See Mahadeva.
Obira, Streptium asperum.
Occhus of Pliny, the Akantheon aria of Theophrastes, supposed to be the Alhagi maurorum.
Ochna Zeylanica, Gomphia angustifolia.
Ochrocarpus longifolius, Calysaccion longifolium.
Ocimum asperum, Coleus barbatus.
Ocinara, a genus of silk-worms. See Bombycina, 412; Insects.
Ocypoda, a genus of swift-footed crabs; O. ceratophthalma, Egypt, Mauritius, New Holland; O. brevicornis, East Indies; O. macrocera, East Indies, Brazil.
Oda, KARN., a ferry boat.
Odalapore battle, fought on the 4th December 1848.
Odallam, MALEAL., Cerbera odallam.
Oday oil of Cochin, from a creeper, given to cattle when much worked.
Odenathus. See Palmyra; Zenobia.
Odoojatee, HIND., Justicia ecbolium.
Œnotheraceæ, the evening primrose tribe of plants, comprising *sp.* of Œnothera, Clarkia, Jussieua, Ludwigia, Lopezia.
Oopata, the Avicennia tomentosa.
Œstrus, the gadfly, Œstrus ovis. See Cephalæmia ovis.
Œthra, a genus of brachyurous crustacea; Œ. seruposa, a greyish-coloured crab, 2 to 3 inches long, Mauritius, Archipelago.
O'-fu-yung, CHIN., Opium.
Ogai, HIND., Astragalus tribuloides.
Ogal, HIND., Fagopyrum emarginatum; Ban ogal, F. cymosum.
Ohind. See Chach.
Oi, Ohi, of Kangra, Albizzia stipulata.
Oiocoptoma. See Insects.
Oilmen, of Southern India, who express oil from seeds, have 12½ sections—Mahratta, lingali, tehela, kanula, ekbaila, erandjan, lat, saoji, termuk, kawno, Muhammadan, toli, 12½ mixed.
Oil-pea, Su-chaw, CHIN.
Oily fly, Cantharides.
Oima tipili, MALEAL., Scindapsus officinalis.
Oimoa, CHIN., Corchorus olitorius.
Oka or Poka, TEL., Areca catechu.
Oka, ARAB., a measure of Baghdad, about 2½ English pints.
Oka chettu or Vaka or Vakudu, TEL., Carissa carandas.
Okamandil. See Kattyawar; Saurashtra.
Oker of Nepal, Helictis Nepalensis.
Okh-hywan, ARAB., Anthemis nobilis.
O-kiau, CHIN., Asses' glue.
Okra, BENG., Zapania nodiflora.
Okro, Abelmoschus esculentus.
Okthaba, a Burmese long measure of 70 feet.
Ol, in Gujerat, Black-mail.
Ol, Jamkund, HIND., Amorphophallus campanulatus.
Ola, Kasir, Durgari, PANJ., Albizzia stipulata.
Olcha, or Mangun, a small Tunguz tribe on the Amur.
Old Man of the Mountain. See Alamut.
Oldenlanda umbellata. See Chay Root.
Olibanum. See Boswellia.
Oligodontidæ. See Reptiles.
Olin, HIND., a fibre of Kangra, from a Chamærops palm.
Olinda, SINGH., Abrus precatorius.
Ollakawlee, Phyllanthus emblica, Emblica myrobalan.
Olus calappoides, Cycas circinalis.
O'm. See Aschara; Aum; Hom.
Omamu, TEL., Ptychotis ajowan.
Oman. See Arabia; Persian Gulf.
Omar, Khalifah.
Ommaya, Khalifah.
Omphis, according to Arrian, son of Taxiles; his father dying at the time of the Greek invasion, Omphis did homage to Alexander, who invested him with the title and estates of his father.
Omra, ARAB., PERS., Nobles, *pl.* of Amir; the third title amongst Indian Muhammadans, as Shams-ul-Umra, Sharf-ul-Umra.
Omully, a fish of the Baikal Lake that annually ascends the Selingue river to spawn, after which they return to the lake. In their ascent the nomade Mongols catch great numbers of them for their winter provisions.
Onum, also Womum, TAM., Ptychotis ajuan? Bishop's weed. The distilled water is a useful carminative.
Omuta. See Pramara.
Onager, Equus onager.
Ondo, MALAY, Dioscorea pentaphylla.
Onesicritus. See Megasthenes.
Onesiculus. See Claudius.
Ongeor Thomb. See Architecture, 147.
Ongdes. See Angdes.
Onitis. See Copridæ.
Onore, Hanawar, Honore, captured 5th January 1783.
Onte of the Society Islands, Paper mulberry.
Oochellu, TAM., Guizotia oleifera.
Oodaipur. See Feudatory.
Ood batti, HIND., Pastilles.
Oodha godhul, HIND., Hibiscus Syriacus.
Oodi-Sagar Lake. See Lakes; Peshola.
Oodoojati, BENG., Justicia ecbolium.
Oolsie of Bombay, Dioscorea pentaphylla.
Oomatay, TAM., Datura, Thorn apple.
Oombur, DUKH., Ficus glomerata.
Oomra and Soomra. See Deserts.
Oonoona guss, SINGH., Pygeum Wightianum.
Oont ka tara, HIND., Echinops echinatus.
Oopadyki, SANSK., Portulaca quadrifida.
Ooplate, GUJ., HIND., Aucklandia costus.
Oopoopoma, Bhora, BENG., Rhizophora mangle.
Oorial, HIND., Ovis cycloceros.
Ooriya. See Central Provinces.
Ooroomiah Lake. See Lakes.
Oo-sheet, BURM., Ægle marmelos.
Ootali panna, TAM., Caryota urens.
Ophelia chirayta, Agathotes chirayta. See Chiretta.
Ophidia. See Reptiles.
Ophiocephalus. See Fishes, 1112.
Ophiophagus elaps. See Reptiles.
Ophiopogon. See Commelyna.
Ophiospermum Sinense, Aquilaria Sinensis.
Ophryeæ. See Orchiaceæ.
O'pi-en, CHIN., Opium. See Amal; Chandu.
Oplismenus hirsutus, Panicum.
Oppidam. See Kasra-i-Shirin.
Opuntia Dillenii, Prickly pear.
Or or Odru tribe. See India; Odru.
Orakzai. See Afghanistan.
Oral, KOL., Pteromys petaurista.
Orang. See Borneo; Malay Peninsula.
Orang Sirani, a Christian people of Batchian.
Oraon. See Chutia Nagpur; Jashpur; Mundah; Sun-worship.
Orazio, a friar who travelled in Central Asia.
Orchaka, BENG., Sonneratia acida.
Ordeal. See Divination; Karahi lena or Tapta-mukti; Tapta-masha.
Oreb. See Fly.
Orelia grandiflora, Allamanda cathartica.
Oreosiris lanuginosa, Chaptalia gossypina.
Orepanocerus—Copridæ.
Orfa. See Edesa.
Organj. See Chorasmia.
Orgyia Zeylanica. See Drepana; Insects.
Orhota, TART., Ginseng.
Orissa. See Architecture; Bengal; Cave Temples; Kanarak; Keunjhar.
Orissa caves, i. 612.
Ormuz. See Hormosia; Persian Gulf.
Ornithoptera remus. See Celebes.
Orpiment, Yellow sulphuret of arsenic. See Arsenic; Realgar.
Orrosino-ki, JAP., Rhus vernicifera.
Orthocarpus, Dolichos catjang.
Orthophagus. See Copridæ.
Ortospana—Opian.
Oscille of Mauritius, Hibiscus sabdariffa.
Osha, HIND., Sterculia villosa.
Oshak, PERS., Dorema ammoniacum.
Oshek napu, MALAY, Tragulus Javanicus.
Osiris. See Omophagia.
Osman. See Khalifah.
Osmanli. See Persia; Turk.
Osphromenus. See Fishes, 1116.
Osprey, Pandion haliætus.
Osrhoene—Orfa.
Ossara rewund, ARAB., PERS., Gamboge.
Ossi tribe. See Kasibek.
Ostiak. See Finn.
Ostracotheres. See Crustacea.
Ostrich family—Struthionidæ.

Oswal. See Jain.
Otaheite chestnut, Inocarpus edulis.
Otaheite gooseberry, Cicca disticha.
Otaheite sugar-cane, Saccharum violaceum.
Othman. See Ertoghrul.
Otis deliciosa, Sypheotidis Bengalensis.
Otis fulva, Sypheotidis auritus.
Otis Lucionensis, Bustard.
Otis nigriceps, Eupodotis Edwardsii.
Otocompsa. See Bulbul.
Otolithus biauritus. See Isinglass.
Otonychium imbricatum, Harpullia imbricata.
Ottagam, TAM., Camel.
Ottel-ambel, CAN., Damasonium Indicum.
Ottelia alismoides, Hydrocharis cellulosa.
Otter, Lutra nair.
Oui. See Colquhoun.
Ouk-khyin-za, BURM., Diospyros, *sp.*
Ouk-sheet, BURM., Æglo marmelos.
Oulous, TURK., a tribe.
Oum Silling or Silleung, a river of Gowhatty.
Ounce, Felis uncia.
Oundi, MAHR., Calophyllum inophyllum.
Oungka. See Simiadæ.
Oung-mai-phyoo, BURM., Clitoria ternatea.
Ouph, HEB., a fowl, a bird.
Our-chaka, BENG., Sonneratia acida.
Oushneh? PERS., Origanum normale.
Oustajalu. See Kazzilbash.
Outch. See Kābul; Khetri.
Outcry, in India a sale by public auction.
Ouzel, *sp.* of Hydrobata; Merula.
Ovalumpilly. See Diamond.
Ovis. See Bovidæ; Mammalia.
Ovis ammonoides, Caprovis argali.
O'wei, Hing-ku, CHIN., Asafœtida.
Owkhar, in Turkestan a name of the Tajak.
Owls, the family Strigidæ, genera bubo, strix, phodilus, syrnium, otus.
Ow-mi-ow, Porcelain. See Colours.
Oxalis acetosella. See Oxalidaceæ.
Oxalis sensitiva, Biophytum sensitivum.
Oxenden, Sir George. See British India, 448.
Oxus. See Amu.
Oxydraceæ, a tribe mentioned by Strabo, Arrian, Curtius, Stephanus, and other travellers.
O'yn, CHIN., Galbanum.
Ozair. See Ezra.

P

PACHAKU, TEL., Cinnamomum iners.
Pacha-pat, HIND., Marrubium, *sp.*
Pacha pesalu, TEL., Phaseolus mungo.
Pach-cha botuku, TEL., Cordia polygama.
Pachcha maanu? TEL., Conocarpus acuminatus.
Pachcha vadambaram, HIND., Justicia cololium.
Pachete. See Hot Springs, 113.
Pachisi. See Chinarpisi.
Pachmari. See Bori.
Pachouti, MALEAL., Isonandra acuminata.
Pachouli, Patcha pat, BENG., Pogostemon patchouli.
Pachūnda, MAHR., Capparis divaricata.
Pa-daing-khyet-thwon, BURM., Scilla Coromandeliana.
Pa-daing-phoo, BURM., Datura alba.
Pada valli, MALEAL., Cyclea Burmanni.
Paddam, Pyah, PANJ., Cerasus puddum.
Paddy (straw), MALAY, Oryza sativa.
Pade narrayan, TAM., Poinciana elata.
Padma, BENG., Nymphæa stellata.
Padma Purana, Kanada.
Padouk, BURM., Pterocarpus Indicus.
Padri, HIND., Stereospermum chelonoides.
Padul, Padal, BENG., Bignonia.
Pac, BURM., Corypha umbraculifera.
Pagadam, TEL., Coral.
Pa-gau-tbeing, BURM., Alpinia nutans.
Paggi. See At'har; Khoj.
Pagoda tree, Plumiera acuminata.
Pagri. See Clothing; Turband.
Paguma laniger. See Viverridæ.
Pagurus, Hermit crab. See Crustacea.
Pahan Island. See Formosa.
Paharia. See Dravidian; Kashmir.
Pahari-arand, HIND., Jatropha curcas.
Pahari pipal, HIND., Populus ciliata.
Pah-koh-hwui-hiang, CHIN., Illicium anisatum.
Pah-muh-yang, CHIN., Aquilaria Sinensis.
Pa-hwo, CHIN., Salisburia adiantifolia.
Pai, BURM., Lablab vulgare.
Paidi tangedu, TEL., Cassia sophora.
Paighambari phul, HIND., Arnebia echioides.
Paik. See Halaya.
Pailoo, CHIN. See Architecture, 148; Toran.
Pai myeet, BURM., Psophocarpus tetragonolobus.
Pai-noung-nee, BURM., Canavalia gladiata.
Painted partridge, Francolinus pictus.
Painted snipe, Rhynchæa Bengalensis. See Scolopacidæ.
Pai-pa-soon, BURM., Cyamopsis psoraloides.
Pai-yen-khyung, BURM., Cajanus Indicus.
Pakania, KACHAN, Rubus, *sp.*
Pakar, HIND., Ficus venosa.
Pakchan river, i. 449.
Pakpattan. See Johya.
Paku maram, TAM., Areca catechu.
Paku tundu, SUMAT., Cycas circinalis.
Pakya, MAHR., Pteromys petaurista.
Pala, Mukanpala, MALEAL., Alstonia scholaris.
Pala, TAM., Achras elengioides.
Palabrotha. See Aloes; Chandragupta; Patna.
Pala chettu, TEL., Wrightia antidysenterica.
Palæmon, Prawns, Shrimps.
Palæornithæ, Parrakeets, Parrot.
Pa-lah, Ba-la, BURM., Electuria cardamomum.
Pala kura, TEL., Oxystelma esculentum.
Palamporc. See Cloths.
Pala sugandhi, TEL., Hemidesmus Indicus.
Palati, SINGH., Hernandi.
Palava-ranu, TAM., Wrightia tinctoria.
Palawang. See Archipelago, 136.
Palay, MALEAL., TAM., Cryptostegia grandiflora.
Pal-dantam, GOD., TEL., Ehretia lævis.
Palek julu, HIND., Rhinacanthus communis.
Palemow. See Chutia Nagpur.
Pali, TAM., Isonandra acuminata.
Palita mandar, BENG., Erythrina Indica.
Palitana. See Architecture, 145; Jain.
Paljor of Chenab, Fragaria Indica.
Palla-gurgi, TEL., Holostemma Rheedianum.
Pallangu hemp of Madras, Ambari.
Pallava. See Chalukya; Palli.
Palli, a town in Central India, a Brahmanical centre. See Brahman, 431.
Pallia, HIND., Funeral monumental pillar. See Sculpture.
Palliwal. See Oswal.
Pallonarua. See Architecture, 147.
Palm swift, Cypselus Batassiensis.
Palmyra—Tadmur.
Palo de Vaca. See Cow-tree; Gymnema.
Palogpong ikan, MALAY, Isinglass, Fish maws.
Palparius contrarius. See Antlion.
Palu, Abhishegam. See Ablution; Hindu, 65.
Palungo, TAM., Hibiscus cannabinus.
Palu paghel, TAM., Momordica dioeca.
Palwal, HIND., Trichosanthes dioeca.
Pa-ma-yi, Lan-t'ang, CHIN., Dammer.
Pa-ma-yu, CHIN., Copal.
Pambah, PERS., Gossypium herbaceum.
Pambu prandu, TAM., Circaetus gallicus.
Pamidi patti, TEL., Gossypium acuminatum.
Pamir. See Central Asia; Upa-Meru.
Pampango. See Philippines.
Pampara panasa, TEL., Citrus decumana.
Pam-pena chettu, TEL., Calosanthes Indica.
Pamu kallu, TAM., Bezoar.
Pan, BENG., HIND., Chavica betle.
Pan, Paik hsan, BURM., Crotalaria juncea.
Pan, Shan, China grass.
Pana. See Cash.
Pana. See Hot Springs, 113; Punna.
Panam katalay, TAM., Agave Americana.
Panam maram, TAM., Borassus flabelliformis.
Panasa, Veru panasa, TEL., Artocarpus integrifolius.
Pana wood, ANGLO-TAM., Calosanthes Indica.
Panax papyrifera, Fatsia papyrifera.
Panay. See Ilooo.
Pancha-kavia. See Hindus, 68.
Pancha Shegam. See Abhishegam.
Panchatantra. See Bidpai; Desha; Hitopa; Literature; Panchopakhyana.
Pancha warna. See Cow.
Panche chettu, TEL., Celosia argentea.
Panchi, TEL., Conocarpus acuminata.

Pan-chi-hwa, CHIN., Bombax ceiba.
Panch-rangi. See Clothing, 748.
Pancratium Amboinense, Eurycles Amboinensis.
Pandaram. See Mala-Arayan.
Pandava. See Kammya-ban.
Pandi, TEL., the hog.
Pandi gadda, TEL., Trapa bispinosa.
Pandiki, TEL., Kydia calycina.
Pandi koku, TEL., Mus bandicota.
Pandi mukku dampa, TEL., Dioscorea pentaphylla.
Pandion lineatus, Poliocetus ichthyœtus.
Panditi vankaia, TEL., Calonyction Roxburghii.
Pandu. See Induvanna.
Paneero, SINDI, Capparis decaisnæi.
Pane tiga, TEL., Cassyta filiformis.
Pang ah, BURM., Terminalia chebula.
Pangasinan. See Philippines.
Pang-giling, MALAY, Ant-eater.
Pangong Lakes. See Lakes.
Pania, MALEAL., Eriodendron anfractuosum.
Paniala, Panijala, HIND., Flacourtia cataphracta.
Pani-juma, BENG., Salix tetrasperma.
Pani-ki-shumbali, DUKH., Vitex trifolia.
Pani kutta, HIND., Lutra nair.
Pani najak, BENG., Desmanthus natans.
Panir, HIND., Withania coagulans.
Panjam. See Clothing, 746.
Panj-angusht, PERS., Boucerosia aucheri.
Panjee. See Clothing, 748.
Panjeh-miriam, ARAB., Cyclamen.
Panjghar, a Makran province of Baluchistan.
Panjpa. See Daurani.
Panjsher valley. See Opian.
Pankhi. See Cloths.
Panmau, CHIN., Mylabris cichorii.
Panmuohri, HIND., Fœniculum panmori.
Pannah. See Diamond.
Pannas, Barral, HIND., Artocarpus integrifolius.
Pannay keeray, TAM., Celosia albida.
Pannei-eri. See Fishes, 1112.
Panni, MALAY, Slave.
Pannir, DUKH., TAM., TEL., Guettarda speciosa.
Panolia acuticornis, Cervidæ.
Pan-sa-yeik, BURM., Ixora coccinea.
Panshen Lama, Tsong-kha-ba.
Pantaleon. See Bactria, 222.
Pan-thay. See Yunnan.
Panther, Felis pardus.
Pantholops Hodgsonii. See Antilopinæ.
Pant-jallang. See Boats.
Panu-kodol, SINGH., Dioscorea bulbifera.
Panyani manche. See Boats, 394.
Pan-yen, BURM., Andropogon muricatus.
Pa-nyoung, BURM., Ficus Indica.
Pao-ho, BHOT., Cuon rutilans.
Papandayang. See Java; Volcano.
Papara, HIND., Gardenia latifolia.
Papara budama, TEL., Citrullus colocynthis.
Papara pulia maram, TAM., Adansonia digitata.
Papatta chettu, TEL., Pavetta Indica.
Papaya vulgaris, Carica papaya.
Papeeta, HIND., Strychnos sancti Ignatii.
Paper mulberry, Broussonetia papyrifera.
Paphor, HIND., Tuber ciberium.
Pappree, HIND., Carbonate of soda.
Pappu kura, TEL., Chenopodium album.
Paprang, BEAS, Buxus sempervirens.
Papu. See Arts, 172.
Papyrus Japonica, Broussonetia papyrifera.
Para, HIND., Hog-deer, Axis porcinus.
Para Brahm: See Brahm.
Paradise fly-catcher. See Bulbul; Husaini.
Parampuan laut, MALAY, Halicore dugong.
Parancha, a clan of the Povindah.
Parapilo. See Bhutan.
Paras of Kaghan, Cerasus cornuta.
Parasgad temple. See Belgaum.
Paras pipal, DUKH., Thespesia populnea.
Pard, Felis pardus, Panther.
Pardanthus Chinensis, Morea Chinensis.
Parihara. See Rajputs.
Parijata tree, Kalpa-vriksha. See Tree.
Parikarma, HIND., Circumambulation.
Parike gadda, TEL., Trapa bispinosa.
Pari lung of Malay, Ætobatis nari nari.
Paringi, TEL., Zizyphus œnoplia.
Parinta, Perintakura, TEL., Corchorus olitorius.
Parinvelamu, TEL., Cyperus hexastachyus.
Parisnath. See Architecture; Jain.
Pari-sosan, PANJ., Adiantum caudatum.
Parmelia. See Dyes.
Parmian, RAVI, Gymnosporia spinosa.
Parmi kulla, BENG., Damasonium Indicum.
Parodoxurus strictus. See Viverridæ.
Paropamisadæ. See Imaus; Opian.
Parotia sex-setacea. See Paradise Birds.
Parra ænea, Jacana.
Parrot fish, Scarus, *sp.*
Parrotia Jacquemontiana. See Bridge.
Parshra, Warshra, SALT RANGE, Adiantum capillus Veneris.
Parsley, Petroselinum sativum.
Parsnip, Pastinaca.
Parsoji. See Bhonsla.
Partabghar. Hindustan, 80.
Parthia. See Aryan; Bactria; Coins; Greece; Persia; Pahlavi.
Partial town. See Diamond.
Partridge. See Pheasant; Tetraonidæ.
Parupu benda, TAM., Abelmoschus ficulneus.
Parupu kire, TAM., Chenopodium album.
Parupu velaga, TEL., Feronia elephantum.
Parusha medha, Human sacrifice.
Parwal. See Oswal.
Paryam, LEPCH., Talpa micrura.
Pasargada. See Fars; Kalanas.
Pashi, Panchi, TEL., Conocarpus acuminatus.
Pashiuba. See Palms.
Pashm, Put, Pam, PERS., Wool.
Pashmina, Par-i-taos, Pat, HIND. See Cloths.
Pasni, a sea-coast district of Baluchistan.
Passerie, Passelie, TAM., Portulaca quadrifida.
Passoor, BENG., Xylocarpus granatum.
Pastu-wanna, SIND., PANJ., Grewia oppositifolia.
Pasupu, Pampi, TEL., Curcuma longa.
Pat, Ban-pat, BENG., Corchorus olitorius.
Pat, HIND., Wool.
Pata, TEL., Cissampelos pareira.
Patala garuda, TEL., Ophioxylon serpentinum.
Pataliputra city, Palibothra, Panchatantra, Patna.
Pàtali tivva, TEL., Cardiospermum halicacabum.
Patanjala. See Darsana.
Patchalai maram, TAM., Dalbergia paniculata.
Patchalay wood, ANGLO-TAM., Dalbergia paniculata.
Patchuk, HIND., Aplotaxis auriculata, Aucklandia costus.
Patelene. See Hyderabad, 135.
Patenta Phrom. See Architecture, 147.
Pat fannas, MAHR., Artocarpus hirsutus.
Pathan bed, HIND., Picrorrhiza kurrooa.
Pathar-ka-phul, DUKH., Lichen rotundatus.
Pa-thi—Yunnan.
Pathiri maram, TAM., Bignonia.
Patiata. See Cis-Sutlej; Feudatory.
Patkoi, i. 449.
Patna. See Palibothra; Sirguja.
Pat patoola, JHELUM, Oreoseris lanuginosa.
Patrang, Joundela, Æchmanthera Wallichii.
Patra Saori—Juanga.
Patsa kaia, TEL., Citrullus colocynthis.
Patsa kallu, TAM., Aquamarine.
Patso. See Clothing, 748.
Patta, HIND., a basket-hilted sword.
Pattangay, HIND., Cæsalpinia sappan.
Patta-pulow, KAMAON, Kydia calycina.
Pattharman, B'a-pattra, JH., Callicarpa.
Patti, BHOT., Fagopyrum emarginatum.
Pattra-banga, SANSK., Aristolochia bracteata.
Pa tu. See Colquhoun.
Patwa, PANJ., Hibiscus sabdariffa.
Patwari, HIND., Accountant.
Paulastya—Kuvera.
Pavili kura, TEL., Portulaca oleracea.
Pavitra, SANSK., Zonar, Poita, Kudumi.
Pawanne, Pauwauke, PANJ., Boucerosia aucheri.
Payah Shekho. See Literature.
Payara, BENG., Psidium pyriferum.
Payeht Gyee—Literature.
Payen-ambhat, BURM., Ambergris.
Paymoostey, TAM., Argyreia Malabarica.
Payrun tuthi, TAM., Abutilon Indicum.
Pazahar-Kani, PERS., Bezoar.
Pea-fowl. See Pavoninæ.
Pear tree, Pyrus communis.
Peda-kal-measura, TEL., Cascaria ovata.
Pedda-are, TEL., Bauhinia.
Pedda botuku, TEL., Cordia myxa.
Pedda chollu, TEL., Eleusine stricta.
Pedda danti, TEL., Celastrus montana.
Pedda dulchirram, TEL., Albizzia lebbek.

Pedda dumpa-rashtrakam, TEL., Alpinia galanga.
Pedda gillakara, TEL., Fœniculum panmori.
Pedda goranta, TEL., Gomphrena globosa.
Pedda kalivi pandu, TEL., Carissa carandas.
Pedda manu, TEL., Ailantus excelsus.
Pedda munga, TAM., Vangueria spinosa.
Pedra-Branca. See Horsburgh.
Peganon of Scriptures, Ruta graveolens.
Pegasidæ. See Syngnathidæ.
Peh-chen-tan, CHIN., Sandal-wood.
Peh-chi, CHIN., Iris florentina, Orris root.
Peh-chi-hiang, CHIN., Opoponax.
Peh-kiau-hiang, CHIN., Storax.
Peh-kiuh-hwa, CHIN., Chrysanthemum album.
Peh-ku, Sang-tsai, CHIN., Lettuce.
Peh-kwa-tsze, CHIN., Benincasa cerifera.
Peh-ma, Ye-ma, CHIN., Hibiscus cannabinus.
Peh-shu, CHIN., Thuja orientalis.
Peh-shuh, Yu-shuh, CHIN., Atractylodes alba.
Peh-tau-k'au, CHIN., Amomum cardamomum.
Peh-t'ung, CHIN., Argentan.
Peh-yu, CHIN. (the tallow), Stillingia sebifera.
Peh-yuen, Peh-t'ung, CHIN., Zinc.
Peing, BURM., Colocasia antiquorum.
Peing-nai, BURM., Artocarpus integrifolius.
Pein-go. See Boats, 398.
Pekea butyrosa, Caryocar butyrosum.
Pekin—Khanbalig.
Pelasgi. See Cyclopes; Ghorbasta.
Pelliculania koleroga. See Coffee Planting, 770.
Pellitory, ENG., Anthemis pyrethrum.
Pei mu, CHIN., Hermodactyl.
Pempheris Molucca, Isinglass.
Pen-lay-hsee, BURM., Ximenia Ægyptiaca.
Pen-lay-pyoun, BURM., Xylocarpus granatum.
Pennacondah. See Bijayanagar.
Pennar river, Canals, i. 564.
Pentaptera paniculata, Terminalia paniculata.
Pepper-wort, Xanthoxylon alatum.
Perpadel, Pudel, TAM., Trichosanthes cucumerina.
Perak. See Malay Peninsula.
Peregrines. See Falconidæ.
Perez d'Andrade. See Portugal.
Periar river, i. 564.
Peridenia. See Botany, 422.
Perim. See Fossils.
Periploca esculenta, Oxystelma esculentum.
Periploca Indica, Hemidesmus Indicus.
Periploca sylvestris, Gymnema sylvestre.
Persepolis. See Istakhr.
Persica vulgaris, Amygdalus Persica.
Persimmon of China, Diospyros kaki.
Pertabghar. See Hindustan, 80.
Peru maram, TAM., Ailantus excelsus.
Peru-marandu, TAM., Aristolochia Indica.
Perunda, TAM., Vitis quadrangularis.
Perun-siragam, TAM., Fennel seed.
Pesala-kaia, TEL., Dolichos Tranquebariensis.
Peshdadian dynasty. See Persia.
Pesh kabz, HIND., a form of dagger.
Petar kura, HIND., Gynocardia odorata.
Peter the Hermit. See Crusades.
Pethri, Bet'har, HIND., Juniperus squamosa.
Petra. See Commerce, 789.
Petrels, *sp.* of the genera Thalassidroma, Pelicanoides.
Peycoomuti-kai, TAM., Colocynth.
Peyyapa, TEL., Ailantus excelsus.
Peyya rodda, TEL., Rottlera laccifera.
Pfees, SIND., Chamærops Ritchiana.
Phag, Phawari of Jhelum, Ficus virgata.
Phailwan. See Athlete; Kushtigar.
Phakial tribe. See Khampti.
Phala. See Ordeal.
Phalangister vulpina. See Opossum.
Phalaris Canariensis, Canary seed.
Phalaris zizania, Andropogon muricatus.
Phalaropus, Stint, Scolopacidæ.
Phal gotsava. See Holi.
Phalja, PANJAB, Populus ciliata.
Phalla, SANSK., Fruit; Phalla hari, Fruit gatherer.
Phalwai, HIND., Cæsalpinia sepiaria.
Phantom, a name given to some of the Phasmæ and Paussidæ.
Phappar, Phulan, Fagopyrum emarginatum.
Pha-rai, BURM., Citrullus cucurbita.
Pharaoh's chicken, Neophron percnopterus.
P'hasah, BENG., a *sp.* of Engraulis.
Phashin, BALUCH., Capra ægagrus.
Phasma, Leaf insect, Walking stick insect.
Phassie, MAHR., Dalbergia paniculata.
P'ha yung-b'han, BURM., Allamanda cathartica.
Pha yung kha, BURM., Cucurbita maxima.
Pheal, BENG., an old jackal.
Pheasants. See Gallinæ; Phasianidæ.
Phechoo, HIND., Aponogeton monostachyon.
Pheca, Hunnia—Marmot.
Pheidole. See Insects; Ponerida.
Philemon. See Copridæ; Insects.
Philippines. See Archipelago, 136.
Philosophies. See Darsana; Hindu.
Philoxenes. See Bactria, 222.
Phineas. See Khaja Khizr.
Phipin. See Dadru; Jhelum; Rhamneæ.
Phiyu-longta, BHOT., Flying fox.
Phlomis cephalotes, Leucas cephalotes.
Phocæna. See Cetacea; Delphinidæ.
Phœnicians. See Literature.
Phœnix, Foong-Hang.
Phok or Phog, CIS-INDUS, Calligonum polygonoides.
Pholidotus Indicus. See Pangolin.
Phoungye. See Rahan; Talapoin.
Phrynium dichotomum, Maranta dichotoma.
Phulan, Darau of Chenab, Buckwheat.
Phulansh, Nangke, CHEN., Ribes.
Phulkian. See Patiala.
Phul makhana, HIND., Asteracantha longifolia.
Phung-nyet, BURM., Calophyllum inophyllum.
Phunt, Tuti, HIND., Cucumis momordica.
Phyllanthus emblica, Emblica officinalis.
Phyllanthus longifolius, Cicca disticha.
Phyllanthus velutinus, Glochidion velutinum.
Phyllium siccifolium, Leaf insect, Phasma.
Phyllopodes. See Crustacea.
Physalia pelegica, Portuguese man-of-war.
Physalis. See Cetacea.
Physeter macrocephalus. See Cachalot; Cetacea; Mammalia; Whales.
Physic nut, Jatropha curcas.
Physostigma venenatum. See Ordeal.
Physostomi. See Fishes.
Phytelephas, Vegetable-ivory palm.
Piak, Niu of Sutlej, Alnus nitida.
Pia-sal? BENG., Terminalia tomentosa; COORG, Pterocarpus marsupium.
Picea. See Coniferæ.
Pichka, SUTLEJ, Odina wodier.
Picræna excelsa. See Bitter Wood.
Picng, Akyab, Iron-wood.
P'ieñ-tau, CHIN., Lentil.
Pien-t'sing, CHIN. See Colours.
Pigeon. Birds; Columba.
Pigeon-pea, Cajanus Indicus, Tour Dhal.
Pigmy hog, Porculia salvania.
Pi-hwang, CHIN., Arsenic.
Pijur, KASHM., Nemorrhœdus.
Pila maram, TAM., Artocarpus integrifolius.
Pilchard. See Clupeidæ.
Pilgrimage sites of Hindus are the many sacred rivers, temples of Brindaban, Ramisseram, Panderpur, Srirangam, Conjeveram, Tripati, Dwarka in Gujerat, Hinglaz in Makran, Pooshkar in Rajputana, Badrinath, Jaganath, Baku; those of Muhammadanism are called haj and ziarat.
Pili jari, HIND., Thalictrum foliolosum.
Piliya, TEL., Urena lobata.
Pilli vendram, TEL., Physalis somnifera.
Pilpai. See Bidpai; Panchatantra.
Pimelodus arius, Arius arius.
Pimento, Allspice; Clove Pepper.
P'i-muh, CHIN., Pterocarpus flavus.
Pina of Philippines, Ananas sativus.
Pinang, Kachu, MALAY, Areca catechu.
Pinardia Roxburghii, Chrysanthemum Roxburghii.
Pinari maram, TAM., Sterculia fœtida.
Pind-alu, HIND., Batatas edulis.
Pindara. See Jowrah.
Pindi banda, TEL., Anisochilos carnosum.
Pindi chettu, TEL., Ficus asperrima.
Pindi donda, TEL., Ærua lanata.
Pind nama. See Sufi.
Pine-apple tribe. See Bromeliaceæ.
Piney varnish tree, ENG., Vateria Indica, Dammer.
Pingala charya. See Patanjali.
P'ing-shie-kung-fen, CHIN., Cosmetic bark.
Pingyat, Ring, CHENAB, Cratægus oxyacantha.
Pini-gala-konga, TEL., Leptoptilos argala.
Pin-lan-kau, CHIN., Gambier.

Pinna pala, TEL., Oxystelma esculentum.
Pinna yelaki chottu, TEL., Hydrocotyle Asiatica.
Pinne maram, TAM., Calophyllum inophyllum.
Pintail, Dafila acuta.
Pin-ta-yau, BURM., Grewia vestita.
Pinus. See Coniferæ.
P'i-P'a, CHIN., Eriobotrya Japonica.
Pipal tree, Ficus religiosa.
Pipe fishes, Syngnathidæ.
Piper betel, Chavica betle.
Pipets, *sp.* of Motacillinæ.
Pippa, Sittu, Situ, PANJ., Boucerosia edulis.
Pippili, DEKH., Chavica Roxburghii.
Pirahi, TAM., Epicarpus orientalis.
Pirangi chakka, TEL., Smilax Chinensis.
Pirate coast. See Illanun; Persian Gulf.
Pirmal. See Copridæ.
Pirman, a deity of the Bermun tribes.
Pir Muggen. See Hot Springs, 112.
Pir Panjal. See Himalaya.
Pir putta, HIND., Chamærops Ritchiana.
Pirunjolay maram, TAM., Hymenodyction utile.
Pisang, MALAY, Plantain, Musa.
Pisangi, Pisingha, TEL., Clerodendron inerme.
Pi-shih, Peh-sin-shih, CHIN., Arsenic.
Pishor, Pisori, HIND., Fothergillia involucrata.
Pisuri, MAHR., Memimna Indica.
Pita-kara, HIND., Chrysophyllum Roxburghii.
Pitambar. Bodice, 402; Clothing, 745.
Pitchakai, TAM., Citrullus cucurbita.
Pitcher plant. See Nepenthes.
Pitha, PANJ., Benincasa cerifera.
Pitha kalabantha, TAM., Agave vivipera.
Pithecus Brookei, Orang-utan.
Pithex oinops, Innuus rhesus.
Pitori, BOMBAY, Trewia nudiflora.
Pit-papra, Papra, HIND., Fumaria officinalis.
Pi-tsi, CHIN., Scirpus.
Pitta kattyan, PALI, the three baskets. See Abhi; Dharmma; Literature.
Pitta-pisinika, TEL., Ehretia buxifolia.
Piumar, Chugu, CHENAB, Plectranthus rugosus.
Pla, HIND., Butea frondosa.
Plagusia. See Fishes, 248.
Pla-kat, MALAY. See Fishes, 1116.
Platanista. See Cetacea; Delphinidæ.
Platax arthriticus, Isinglass.
Plato. See Bactria, 222.
Platycercinæ, the Australian parakeets, Parrot.
Plectranthus barbatus, Coleus barbatus.
Plectranthus crassifolius, Anisochilos carnosum.
Pleiades. See Panchami Rishi.
Pleuropterus. See Insects; Paussidæ.
Plewan, Plewane, PUSHTU, Salvadora oleoides.
Plithana. See Paitan.
Plocaria. See Agar-Agar; Ceylon Moss; Kucheuma spinosum; Laminaria; Sea-weeds.
Plotosus. See Fishes, 1116.
Plotus. See Heron.
Plover, *sp.* of the families Cursoridæ, Glareolidæ, Charadridæ.
Plukenet, Leonard. See Botany.
Pneumonanthe kurroo, Gentiana kurroo.
Poah, NEPAL., Rhea.
Pòalam, Karang, MALAY, Coral.
Pochard, Branta rufina, Aythya ferina.
Pocree of Delhi, Cotton gatherer.
Podala manu, TEL., Acacia catechu.
Podalang kai, Pavai, TAM., Momordica charantia.
Poda patra, TEL., Gymnema sylvestre.
Podavalam, MALEAL., Trichosanthes cucumerina.
Poddu or Proddu tirugudda chellu, TEL., Helianthus annuus.
Podu talli, TAM., Zapania nodiflora.
Podyceps. See Colymbidæ.
Poee of Garhwal, KAMAON, Boehmeria frutescens.
Poey-ne-yet. See Pun-yet; Resins.
Poghadamullay, TEL., Nyctanthes arbor tristis.
Poh-fu-lan, CHIN., Saffron.
Poi, Safed poin, BENG., Basella alba.
Poinciania coriaria, Cæsalpinea coriaria.
Poindee pootee, TEL., Flagellaria Indica.
Poita, Poitu, BENG., Zonar.
Pokhar-mul, PANJ., Dolomiea macrocephala.
Pokhraj, HIND., Topaz.
Pola, Puli, PANJ., Rydia calycina.
Polai, Plyc of Borneo, Sonneratia acida.
Poliœtus. See Eagle.
Polla, Kakandaka-conuveh, MALEAL., Anamirta cocculus.
Pollari, Pollai, TEL., Antidesma pubescens.
Po-lo-mih, Po-lo-mah, CHIN., Artocarpus incisus.
Polumorinika, TEL., Cadaba Indica.
Polyalthia longifolia, Guatteria longifolia.
Polygar. See Colleri.
Polynemus heptadactylus. See Isinglass.
Polynemus risua, Paradise fish.
Polynemus sele. See Sulea.
Polyodontia? Walkerii, Pygeum Ceylanicum.
Polyphema Jaca, Artocarpus integrifolius.
Polypifera. See Zoophyte.
Polyporus. See Fungus.
Pomphrets. See Fishes, 1116, 1118.
Ponam tagera, MALEAL., Cassia sophora.
Ponna, MALEAL., Calophyllum inophyllum.
Pooah of the Parbuttiah, Boehmeria frutescens.
Pooay. See Drama; Literature.
Pooi, a tribe on the Arakan Hills.
Poon, Poone, MALABAR, Calophyllum elatum.
Pooniah. See Deserts, 920.
Popalzai. See Daurani.
Pora batul, HIND., Ipomœa pestigridis.
Porahit. See Rajput.
Pora sham, TAM., Chloroxylon.
Porcelain. See Arts, 171; Ceramic Work; Earthenware; Kaolin; Pottery.
Porculia salvania. See Boar; Suidæ.
Porcupines, *sp.* of Hystrix.
Porebandar. See Bhownagar; Junagarh.
Porilla sopara, TEL., Dalbergia paniculata.
Porpoises. See Cetacea; Mammalia; Platanista Gangetica; Pl. Indi; Whales.
Porprang, HIND., Glinus lotoides.
Portia tree, Thespesia populnea.
Portugal. See Albuquerque; Commerce; Dacca; E. I. Company.
Po sha, Spilecha, PERS., Fothergillia involucrata.
Posoqueria dumetorum, Randia.
Potari, TEL., Kydia calycina.
Poti batsalla kura, TEL., Basella cordifolia.
Pot metal. See Alloys.
Potti dumpa, TEL., Gloriosa superba.
Pottil-uppu, TAM., TEL., Saltpetre.
Pottla kaya, TEL., Trichosanthes anguina.
Potu-kakara, TEL., Momordica dioeca.
Potu kondalu, TEL., Cajanus Indicus.
Potupullu, MALEAL., Cyperus inundatus.
Potu-tadi, TEL., Borassus flabelliformis.
Potu-vadla, TEL., Hiptage madablota.
Pouk, BURM., Æschynomene aspera.
Pouk-pin, Poukenway, BURM., Butea frondosa.
Pounam. See Puna Kad.
Poupartia mangifera, Spondias mangifera.
Prabodha Chandrodaya. See Krishna; Misra.
Pradhan. See Sankhya.
Prakrita bhasha. See Language; Literature.
Pranhita. See Chanda; Sironcha.
Pratob Yantra. See Yantra.
Prattima, TEL., Idols.
Pratyuk pushpi, TEL., Achyranthes aspera.
Pravarasenapura, Kashmir.
Prawns. See Alpheus; Crustacea; Palemonidæ.
Prayag—Ilahabad.
Prester John. See Kerait.
Preta. See Bhut.
Priapus. See Phallus; Roman.
Prin-t'sing, CHIN., Cobalt.
Prionodon pardicolor. See Viverridæ.
Pritha, also Parshni. See Kunti.
Prithivi Raj Chohan Rasa, a heroic poem by Chand.
Privet, ENG., Lawsonia inermis.
Priyadarsini jammi, TEL., Prosopis spicigera.
Proiphys Amboinense, Eurycles Amboinensis.
Pronaos. See Rori Barolli.
Prosopis. See Adenanthera.
Protium Gileadense, Balsamodendron Berryi.
Protozoa. See Zoophyte.
Prunus Armeniaca, Armeniaca vulgaris.
Prunus padus, Cerasus cornuta.
Prunus puddum, Cerasus puddum.
Prunus sebistana, Cordia myxa.
Psammodynastes pulverulentus. See Reptiles.
Psammophidæ. See Reptiles.
Pseudococcus. See Coffee Planting.
Pseudomyrma. See Ponerida.
Psychodendron trifoliata, Andrachne trifoliata.
Psychotria volubilis, Psoderia fœtida.
Pterocarpus dalbergioides. See Padouk.
Pterocarpus sissoo, Dalbergia sissoo.
Pterocles exusta, the desert partridge.
Pteromys petaurista. See Sciuridæ.

Pteropodidæ, Fox bats. See Cheiroptera.
Pterosoma plana. See Heteropoda.
Ptiloris magnifica, Paradise birds.
Ptits-chei-klei, MALAY, Bird-lime.
Ptoon, HIND., Euphorbia nivulia.
Ptyas mucosus. See Reptiles.
Pua, TIB., Arctomys hemachalanus.
Pua-jetti, MALEAL., Gomphia angustifolia.
Puar. See Dhar.
Pubha, Hool, MAHR., Chickrassia tabularis.
Puchail. See Bhynsror.
Pucrasia. See Phasianidæ.
Pudalunkai, TAM., Trichosanthes anguina.
Pudangalli, TAM., Preciloneuron pauciflorum.
Pudari of Sutlej, Erythrina arborescens, Hamiltonia suaveolens.
Puddy or Pädi. See Olluck; Weights.
Pudhan, Juanga.
Pudie-kelengu, MALEAL., Dioscorea aculeata.
Puducotta. British India; Feudatory; Hindustan, 81.
Puga. See Hot Springs, 111, 112.
Puh-fen, Shwui-fen, CHIN., Cosmetic bark.
Puh-hwui-muh, CHIN. Asbestos.
Pui, BENG., Basella.
Pukandel, TEL., Rhizophora mucronata.
Pukhtan. See Afghanistan.
Pukki, TEL., Epicarpus orientalis.
Pu-konga, TEL., Phœnicopterus roseus.
Pukuna, HIND., Rubus.
Pula, Pulli, PANJ., Kydia calycina.
Pulai namaji of Coimbt., Crotalaria juncea, Hibiscus cannabinus.
Pulang-kalangu, TAM., Zedoary.
Pulasa, Kinaka, BENG., Butea frondosa.
Pu-lau-pe-nang, BURM., Janipha manihot.
Pulayar, the Mala-Arayan Pallan.
Puli, TAM., TEL., Tiger.
Puliari kirny, TAM. See Oxalidaceæ.
Pulicat Lake. See Lakes.
Pulie, TAM. See Tamarind.
Pulim, Imbool, SINGH., Eriodendron anfractuosum.
Pulitah, HIND., a lamp charm.
Pullachinta, TEL. See Oxalidaceæ.
Pulla manda, TEL., Ceropegia tuberosa.
Pulla pampara panasa, TEL., Citrus decumana.
Pulney. See Hindustan, 77; Mountains.
Pulo-Aor. See Horsburgh.
Pul-valli, MALEAL., Chonemorpha Malabarica.
Pulychay kire, TAM., Hibiscus sabdariffa.
Pu maram, Puvati, TAM., Schleichera trijuga.
Pu-marda, TAM., Terminalia paniculata.
Pumpkin, Cucurbita maxima, Lagenaria vulgaris.
Pumplemoss, MALAY, Citrus decumana.
Pun, PANJ., Typha elephantina, Bulrushes.
Punachu, TEL., Hydrilla verticillata.
Punag champa, BENG., Alpinia nutans.
Punaghutti bhaji, DUKH., Alternanthera sessilis.
Punagu pilli, TEL., Viverra Malaccensis.
Punan. See Borneo, 418.
Pu-nari, TAM., Phœnicopterus roseus.
Punar-janm. Hindu, 66.
Punarkany kirai, TAM., Alternanthera sessilis.
Punaveri, TAM., Cassia sophora.
Punchoria. See Jetwa.
Punday, Pundrica, CAN., Hibiscus cannabinus.
Pundna of Sutlej, Glochidion velutinum.
Pundri Kacha. See Hindus, 70.
Pung-ben, BURM., Physalis somnifera.
Pung-ma-theing, BURM., Blumea grandis.
Pung-sha, Pang-sha, CHIN., Borax.
Pungu, ANIMALLAY, Calophyllum elatum.
Punji, Van-paratie, TAM., Cotton.
Punnaga chettu, TEL., Calophyllum inophyllum.
Punnagamu chettu, TEL., Rottlera tinctoria.
Punniar. See Sindia.
Punyahava chanam. Hindu, 65.
Punya jana. See Yaksha.
Pupalia orbiculata, Sand-binding plant.
Pur, Buruga, TEL., Eriodendron anfractuosum.
Purana. See Hindu, 59; Kalika; Mimansa.
Puranic school—Sankhya.
Purasa maram, TAM., Thespesia populnea.
Purigaddi, TEL., Cyperus bulbosus.
Purjiu, RAVI, Oreoseris lanuginosa.
Purtial. See Diamond.
Purugu pallay, TEL., Aristolochia bracteata.
Purusha ratnam, TEL., Ionidium suffruticosum.
Pushiny kaia, TAM., Cucurbita maxima.
Pushkara mulamu, TEL., Costus speciosus.
Pusnee, BENG., Oryza sativa.
Pus-wael, SINGH., Entada pursætha.
Put, a district of Cutch.
Put, Surat, TURK., Idols.
Puta, GUJ., HIND., Fish maws.
Putalli maram, TAM., Givottia rottleriformis.
Putera dib, SIND., Typha elephantina.
Puth, a form of Choli.
Puthin, HIND., Mullet fish.
Puthuschary vullo kelangu, TAM., Dioscorea purpurea.
Putiki, TEL., Grewia Asiatica.
Putla podara, TEL., Gymnema sylvestre.
Putra jivi, Yarala, TEL., Putranjiva Roxburghii.
Putrotsavam. See Hindu, 65.
Putruj, HIND., Cinnamomum nitidum.
Putsa kai, TEL., Colocynth.
Puvandi, Ponnanga, TAM., Sapindus emarginatus.
Puvarasa maram, TAM., Thespesia populnea.
Puvvu-gutti gadda, TEL., Amphidonax karka.
Puwak, SINGH., Areca catechu.
Pya of Akyab, Iron-wood.
Pyal, Piar cheronji, HIND., Buchanania latifolia.
Pycnonotus. See Bulbul.
Pymma, BURM., Lagerstræmia regina.
Pyn-ka-do, BURM., Xylia dolabriformis.
Pyoung, BURM., Gavæus gaurus.
Pyrethræ. See Gardez.
Pyrethrum roseum, Chrysanthemum roseum.
Pyrosoma. See Phosphorescence; Tunicata.
Pyrus tomentosa, Cydonia vulgaris.
Pythias. See Damon.
Pythonidæ, Reptiles, Boa.
Pytun-kai, TAM., Dolichos Tranquebariensis.
Pyu, Soung, BURM., Eruguiera parviflora, Rhizophora.

Q

QUAGGA. See Equidæ.
Quara tauvil, EGYPT., Cucurbita lagenaria.
Quay. See Yunnan.
Quedah—Kedah.
Quercaceæ, the nut tribe of plants, comprising the genera Carpinus, Corylus, Castanea, Quercus, and Lithocarpus. See Dyes.
Quetta. See Baluchistan.
Quicksilver. See Archipelago, 140.
Quingambo of West Indies, Abelmoschus esculentus.
Quinine. See Cinchona.
Quoia-pepali, TEL., Salicornia Indica.
Quoiloo, TEL., Salicornia bractiata.
Quoi-tota-kura, TEL., Amarantus tristis.

R

RA of the Chaldees, God. See Chaldæa, 642.
Raamah. See Povindah.
Rab, HIND., a preserve; inspissated juice.
Rabunuj, ARAB., Chamomile.
Races. See British India; Hindustan, 78.
Racha usiriko, TAM., TEL., Cicca disticha.
Raggi, DUKH., Eleusine coracana.
Raghu Vansa, by Kalidasa.
Ra-giyu, BHOT., Nemorrhœdus goral.
Ra-goa, TIB., Procapra picticaudata.
Rahtor. See Deserts; Kach'hwaha; Rajputs.
Rai. See Eaka.
Raipur. See Central Provinces.
Rajagriha. See Ajata Satra.
Rajali, Nisactus bonelli.
Raja Su, Imperial installation. See Aswa Medha, 197.
Rajputuka, HIND., Punceria coagulans.
Raj Samand—Kankrowlee Lake.
Rajun, HIND., Mimusops hexandra.
Rajur. See Deserts, 920.
Rakhal, BEAS, Taxus baccata, the Himalayan yew.
Rakhal-phal, BENG., Schmidelia serrata.
Rakhi-band-bhai, a brother made by acceptance of a bracelet. See Brother-making.
Rakt-japa, HIND., Hibiscus, sp.; Rakt kaner, also Karhir, Nerium odorum.
Rakto chandan, BENG., Adenanthera pavonina, SANSK., Pterocarpus santalinus.
Rakto shimul, BENG., Salmalia Malabarica.
Rakupala, TEL., Zizyphus glabrata.
Rakus, HIND., Agave Americana.
Ral, Rala, HIND., Resins.

Ral, Rala, Dukh., Millet, Panicum miliaceum.
Rama. See Solar Race.
Ramalcotta. See Diamond.
Ramanand. See Hindu, 61; Siva.
Rama Naomi. See Kirtan.
Ramanuja. See Basava.
Rama sita maram, Tam., Anona reticulata.
Ramayanam. See Kambar.
Rambeh or Ramboi, Piorardia dulcis.
Ram Chandar ki kup. See Oritæ.
Ram-hun, Kash., Cuon rutilans.
Rami, Beng., Malay, China grass, Rhea.
Rami tsjua, Malay, Corchorus olitorius.
Rammisseram vayr, Tam., Chay root.
Rampak-rampak, Malay, Spices.
Rampur chadr. See Blanket.
Ramsay, Captain. See Birds, 367.
Ramtilla oleifera, Guizotia oleifera.
Ram-toolshee, Hind., Ocimum gratissimum, Melissa officinalis.
Ram turai, Hind., Abelmoschus esculentus.
Ramu, Kash., Nemorrhœdus bubalina.
Ramzan. See I'd.
Rana guvva, Tel., Cycas circinalis.
Ranawut. See Bhumia, 353.
Ran-bor, Mahr., Zizyphus glabrata.
Ran-fannas, Mahr., Artocarpus hirsutus.
Rangoon creeper, Quisqualis Indica.
Rang-runt of Kanawar, Lagomys Roylei.
Rangtsa. See Boro, 420.
Ran jambool, Mahr., Eugenia caryophyllata.
Ranjana, Ranjuna, Hind., Adenanthera pavonina.
Ran sarras, Dekh., Mal., Albizzia odoratissima.
Ranthual, Chenab, Pyrus aucuparia.
Ra-pho-che, Lepch., Capra megaceros.
Rara, Hind., Randia dumetorum, also Pongamia glabra.
Rasad, Hind., Provision, Supply.
Rasamala, Malay, Liquidambar styraciflua.
Rasanna (kura sanna), Hind., Berthollctia lanccolata.
Rasatala. See Patala.
Rasaut, Hind., Berberis extract.
Rascapur, Hind., Corrosive sublimate.
Rase, Kusturi, Malay, Civet.
Rashid-ud-Din, Jami-ut-Tuarikh.
Ras Yatra. See Bindraban.
Rata Ghorka, Singh., Xanthochymus pictorius.
Rata jot, Hind., Onosma echioides, Vinca.
Rata-kodol, Dioscorea sativa.
Rata komadu, Cucumis melo.
Ratami, Singh., Achras sapota.
Rata nelli, Singh., Cicca disticha.
Ratan kat, Hind., Andromeda ovalifolia.
Ratel, Mellivora Indica.
Rath (Ruth). See Car; Cave Temples, i. 610.
Ratipanchi, Tel., Lichen rotundatus.
Rati-surkh, Hind., Trichodesma Indica.
Rattun puruss, Dukh., Ionidium suffruticosum.
Ratwa, Nepal.; Cervulus aureus.
Ravana suruni misalu, Tel., Spinifex squarrosa.
Ravi, or Hydraotes.
Ravine deer, Gazella Bennettii.
Rayo duru dumpa, Tel., Eulophia virens.
Raymond—Perron.
Rayyi pappu jaji, Tel., Grislea tomentosa.
Razian-i-rumi, Pers., Aniseed.
Razianuj, Arab., Fennel seed.
Real. See Coins, 780.
Realgar, Red sulphuret of arsenic.
Rebari. See Deserts, 920.
Red-breasts, Cyornis rubeculoides, C. banyumas, C. Tickelliæ, and C. magnirostris.
Red cotton tree, Salmalia Malabarica.
Red deer, Cervus Wallichii.
Red fish. See Fish Roe.
Red Sea. See Oscillatoria rubescens.
Red starts, Ruticella, *sp.*
Red wood trees, Adenanthera pavonina; Pterocarpus Indica, Pt. santalinus, Sanders-wood.
Reech, Hind., Boar.
Reed, Phragmitis, *sp.*
Reed-bird, Schœnicola platyura.
Regu manu, Tel., Zizyphus jujuba.
Regur, Hind. See Black Soil.
Regutti, Tel., Capparis grandis.
Rehar. See Pramara.
Reichardia decapitala, Cæsalpinia sepiaria.
Reindeer, Tarandus rangifer.
Rejang. See Archipelago, 137.
Religion. See Hindus; Hindustan, 78.
Rembha. See Swarga.
Remora—Echeneis.
Rencalma Sumatrana, Alpinia Malaccensis.
Reodan, Hind., Tecoma undulata.
Reora, Hind., Bignonia undulata, Holarhena pubescens.
Reri, Hind., Typha angustifolia.
Reru, Beas, Acacia leucophlæa.
Reshami, Reshambuti, Sarmei, Hind., Berthollctia lanccolata.
Retti, Pema-retti, Sansk., Anisomeles Malabarica.
Revi, Hind., red powder, from fruit of the Rottleria tinctoria.
Rewa. See Central India; Hindustan, 83; Rajputs.
Rewa Kanta. See Feudatory.
Rewand Chini, Hind., Rheum palmatum.
Reygatti, Tel., Capparis grandis.
Reyla, Tel., Poinciana pulcherrima, also Cathartocarpus fistula.
Reyyi kada or Ravakáda, Tel., Salsola nudiflora.
Reyyi pappu, or Jaji, Tel., Grislea tomentosa.
Rezian-i-rumi, Pers., Pimpinella.
Rhamnus jujuba, Zizyphus jujuba.
Rhamnus trigynus, Sageretia hamosa.
Rhaphis trivalvis, Chrysopogon acicularis.
Rhea—Parvati.
Rhea, Hind., Boehmeria nivea, China grass. See Fibres; Urticacere.
Rheede, Henry Van. See Botany.
Rhetsa maram, Tam., Xanthoxylon rhetsa.
Rhinolophinæ. See Bats; Cheiroptera; Vampyridæ.
Rhinolophus, Hipposideros speoris.
Rhizophora caseolaris, Sonneratia acida.
Rhizophora corniculata, Ægiceras fragrans.
Rhizophora decandra, Ceriops Roxburghianus.
Rhizophora parviflora, Bruguiera parviflora.
Rhizostoma. See Jelly-Fish.
Rhoa. See Orfa.
Rhodia newara, a silk-worm of Nepal. See Bombycina, 412.
Rhodymenia. See Sea-weeds.
Rhopala robusta, Helicia robusta.
Rhora, Beng., Rhizophora mucronata.
Rhynchæa Bengalensis, Scolopacidæ.
Rhynchosia viscosa, Dolichos glutinosus.
Rib-faced deer, Cervulus aureus.
Rice-paper plant, Aralia papyrifera, Fatsia papyrifera.
Rice weevil. See Insects; Weevils.
Rich, Hind., Ursus, *sp.* See Bear: Ursidæ.
Rig Veda Sanhita. See Hindu.
Rikkan, Ban-frastu, Chenab, Populus ciliata.
Rinaca zuleika, a silk-worm of Sikkim. See Bombycina, 412.
Rinchor. See Kal-yamun.
Ring, Ringo, Kangra, Cratægus oxyacantha.
Ringworm shrub, Cassia alata.
Rishi, Panchama Rishi.
Rita, Aritah, Hind., Soap-nut, Sapindus rubiginosus.
Riti, Ritti, Singh., Antiaris innoxia.
Robin, Thamnobia and Pratincola, *sp.*
Rocella tinctoria, Orchilla weed.
Rock grouse. See Birds; Pteroclidæ.
Rockeb-el-jammel, Arab., Chenopodium viride.
Roga chettu, Tel., Anisochilus carnosum.
Rohi or Kalr or Reh, Hind., Saline efflorescence on soil, Carbonates, Chlorates, Sulphates of Soda; Chitta rohi, land with salt efflorescence; Chikna kalr, a kind of soil used to remedy kalr.
Rohilkhand. See Canals, i. 563; Pathan.
Rohitaka, also Rohuna, Tel., Amoora rohituka.
Rollers, *sp.* of Coracias, Eurystomus.
Rondeletia Asiatica, Webera corymbosa.
Rondeletia cymosa, Canthium didymum.
Rongdo. See Tibet.
Rontal, Jav., Borassus flabelliformis.
Roosa grass, Andropogon Martini.
Rosa kanda, Singh., Dioscorea alata.
Rosary. See Tasbih.
Rose maloes, Liquid storax.
Rose-wood tree, Dalbergia latifolia; Blackwood, Dalbergia sissoides.
Rotan, Malay, Canes, Ratan.
Rotenjot, Kash., Jatropha curcas.
Rotikubung, Malay, Datura fastuosa.
Rottlera Indica, Trewia nudiflora.
Rottlera Thwaitesii, Podadenia sapida.
Roughan balsam, Hind., Balsamodendron Berryi, Opobalsam.
Rous, Kash., Moschus moschiferus.
Roz, Rogh, Nil, Lil, Hind., Nilgai.
Ruba-barik, Hind., Solanum dulcamara.
Rucervus Duvaucelli. See Cervidæ.
Rudder fish, Caranx Rottleri.
Rudiki. See Abu-l-Hasan; Bedpai.
Rudra bhumi, Sansk., Tel. See Marghat; Smasan.

Rudraksha chettu, TEL., Guazuma tomentosum.
Ruellia intrusa, Asystasia Coromandeliana.
Ruellia longifolia, Asteracantha longifolia.
Ruellia uliginosa, Adenosma uliginosa.
Rugs. See Carpets.
Ru-i, MAHR., Portax pictus.
Rujuni-gundha, BENG., Polianthes tuberosa.
Rul, Hippophae rhamnoides.
Rumal. See Clothing, 748.
Rumi mustaki, HIND., TAM., Mastic, Pistacia lentiscus.
Rumph, George Everard. See Botany.
Ru-mubarik, HIND., Haliastur Indus.
Runn of Cutch. See Kharagora.
Rup Narayan river. See Hugli.
Rusa hippelaphus, the Sambur. See Cervidæ.
Rusaut, Rusot, HIND., Berberis aristata.
Rusi, Roz, HIND., MAHR., Portax pictus.
Rusi-gugar, KASH., Pteromys petaurista.
Russa usareki, TEL., Phyllanthus distichus.
Russia in Asia. See Central Asia.
Rutti, HIND., Abrus precatorius.
Rynin, BEAS, Alnus nitida.
Ryet-bet-ya, BURM., Bochmeria interrupta.
Ryot. See Cultivators; Husbandry.

S

SA, SAT., HIND., Nemorrhœdus goral.
Sab, ARAB., Cyperus hexastachyus.
Saba. See Abd-us-Shams.
Sabaah, Seven Bedouin tribes.
Sabaktagin. See Peshawar.
Sabuni, BENG., Trianthema obcordatum.
Sabza. See Cannabis.
Sachang, JAV., Cæsalpinia sappan.
Sacred trees. See Hindu, 65.
Sacrifice. See Buddan; Kurban; Medha.
Sadab, MALAY, Ruta graveolens.
Sada bori, Bozidan, HIND., Asparagus racemosus.
Sada kuppe, TAM., Anethum graveolens.
Sad'h. See Bir-bhan.
Sadia. See i. 438.
Sadi modi, BENG., Emilia sonchifolia.
Sadrus, HIND., Cinnamomum nitidum.
Sad-ud-Din Mahmud. See Sufi.
Safarjal, ARAB., Cydonia vulgaris.
Safeda, HIND., Ceruse.
Safed Koh. See Peshawur.
Safed-musli, HIND., DUKH., Asparagus adscendens.
Saffron, Crocus sativus.
Sag, HIND., Greens, Amarantus.
Sagapenum, Ferula Persica.
Sagapu maram, TAM., Hymenodyction excelsum.
Sagargota, MAHR., Guilandina bonduc.
Sag-dîd. See Bridge, 445; Chinvat; Parsee.
Sagoani, HIND., Dæmia extensa.
Sag-paluk, Paluk, HIND., Spinacia.
Saha-devi, HIND., Vernonia cinerea, Crozophora plicata.
Saharawan, District of Baluchistan.
Sahm, ARAB., Arrows. See Ordeal.
Sahrai. See Deserts, 920.
Sahri Balol. See Cave Temples, 611.
Sahuca bean, Soja hispida.
Saigon. See Cochin-China.
Saila. See Pallonarua.
Sail-i-majnun, HIND., Salix Babylonica.
St. George of England, Jirjis, Khizr, Lydia.
St. Ignatius' bean, Strychnos sancti Ignatii.
St. John's bread, Carrot tree.
St. John's wort, Hypericum perforatum.
St. Louis. See Crusades.
St. Thomé. See Pancha-tantra.
Saivala, HIND., Vallisneria spiralis.
Sajada. See Ko-tcou; Salutation.
Sajji, HIND., Carbonate of soda.
Sajna, BENG., Horse-radish tree.
Saka, Peshawur.
Sakai. See Binua; Gunong; Kedah; Malay Peninsula.
Sakam kuzira, JAPAN, Cetacea, Whales.
Saker, HIND., Falco sacer.
Sak-hiang, CHIN., Aloes-wood.
Saki, Sak, JAPAN, Arrack.
Sakin, Skin, HIND., Capra sibirica.
Sakkar, ARAB., a water-carrier.
Saklawiah, a canal from the lower range of the Euphrates.
Sakra. See Indra.
Saksandar, SINGH., Aristolochia Indica.
Sakta. See Hindu, 58, 62; Tantra.
Saku, a cane bridge of the Dihang.
Sakya, the tribal name of Buddha.
Sal, HIND., Vatica robusta.
Sala, HIND., a brother-in-law; in Bengal, a term of abuse.
Saladang, SUMATRA, Tapirus Malayanus.
Salai dhup of Nepal, Pinus.
Salah-ud-Din (Saladin). See Jericho; Orfa.
Salassa lola, a silk-worm. See Bombycina.
Sa-lat, BURM., Calpicarpum Roxburghii.
Sa-lat-nee, BURM., Graptophyllum hortense.
Salendong. See Clothing, 748.
Salendra, MAHR., Porcupine.
Salep-i-shaitan, PERS., Cicuta virosa.
Salep misri, Eulophia virens.
Salimote. See Clothing, 748.
Salmalia Malabarica, Bombax Malabaricum.
Salor. See Turkoman.
Salsette. See Cave Temples.
Salsify, Tragopogon gracilis.
Salsola plants. See Carbonate of Soda.
Salt Lake. See Jodhpur.
Salt Range. See Mountains.
Salt works. See Kharagora.
Salunki. See Chalukya.
Salutation. See Ashtanga.
Sama, Ambu of Ravi, Glochidion velutinum.
Samadrupu nurugu, TEL., Cuttle-fish bone.
Samagh Arabi, ARAB., Gum-Arabic.
Samagh-ul-mahrus, ARAB., Ferula asafœtida.
Samar. See Philippines.
Samaragdus mons, Jabal zabarah.
Sama-rogh, HIND., Morchella.
Samato, TEL., Fourcroya cantala.
Sambal, HIND., Berberis lycium.
Sambar, HIND., Rusa equina, R. hippelaphus.
Sambar Salt Lake. See Lakes.
Sambool, TAM., Ashes. See Vibadi.
Sambrani, TAM., Boswellia thurifera.
Sambrani chettu, TEL., Herpestris monniera.
Sambrani manu, TEL., Parkia biglandulosa.
Sambu. See Jam.
Samdulun, HIND., Elephantopus scaber.
Samet Sikhar. See Parasnath.
Sami stone, Agalmatolite.
Sammiong, LEPCH., the Marmot.
Samoka, Jamauka, HIND., Citrullus cucurbita.
Sampan. See Boats, 398.
Sampga, CAN., Hocomlia montana.
Samp-mar, HIND., Circaetus gallicus.
Sam-po-ho, CHIN., Indus.
Samsan, Smasan, Cremation place, Chiwana, Marghat.
Samshu, ANGLO-CHIN., Alcohol, Arrack.
Samstravadi, SANSK., Barringtonia racemosa.
Samudra pu maram, Barringtonia racemosa.
Samudrapu tainkaya, TEL., Sea-cocoanut.
Samudra shoka, HIND., Argyreia speciosa.
Sa-mung-net, BURM., Nigella sativa.
Sa-mung-ni, BURM., Lepidium sativum.
Samya, Roro, MOLUCCAS, Cæsalpinia sappan.
San or Sansi, the sun-god of the Chaldees.
Sanaga, TEL., Cicer arietinum.
Sanchi. See Serpent-worship.
Sanctuary, Sirna, Bast.
Sandpiper, sp. of Actitis.
Sandracottus. See Chandragupta.
Sandura, SANSK., Red lead.
Sanejir. See Celebes.
Sanga, HIND., a stone or timber bridge or breastwork.
Sangala or Sakala. See Arashtra; Kathæi.
Sangam, HIND. See Confluence.
Sang-i-pamba, Sang-i-reshalar. PERS., Asbestos.
Sang-i-Sulimani, PERS., Onyx.
Sang-i-yashm, PERS., Jade.
Sang-kupi, DUKH., Clerodendron inerme.
Sang-nai, Panolia acutiformis.
Sang-pu river. See i. 437.
Sangreal, Holy fig tree.
Sang-ti-whang, CHIN., Rehmannia Chinensis.
Sanjan. See Parsee.
Sankaria, shell bracelet makers of Dacca.
Sankha-tunga, TEL., Cyperus hexastachyus.
Sankhya. See Darsana.
San-ki, MANILLA, Illicium anisatum.
Sankla. See Pramara; Rajputs.
Sank pushpi, HIND., Evolvulus alsinoides.
Sanna mukhi, ARAB., HIND., Cassia elongata.
Sanne. See Yakka.
Sano-banel, NEPAL., Porcelia salvania.
Santanu—Kuru.
Santipur. See Triveni.
Sanwak, HIND., Oplismenus.
San-yeh-san, CHIN., Aglaia odorata.
Sanzilleh, PUSHTU, Elæagnus orientalis.
Sapata cherri, TAM., Hibiscus rosa Sinensis.
Sapek. See Coins, 780; Tsien.

Sapium sebiferum, Stillingia sebifera.
Sap maril, BENG., Circaetus gallicus.
Sapota elengioides, Achras elengioides.
Sappara. See Babylonia.
Sapta-pathinam. See Hindu, 71; Marriages.
Sarab'ha. See Yali.
Saraca pinnata, Jonesia asoka.
Saracens. Hospital, 111.
Sarang-burong, MAL., Bird nests.
Sarao, Serow, HIND., Nemorrhœdus bubalina.
Saraogi. See Oswal.
Saras. See Crane.
Saraswati. See Brahmans, 431; Hugli; Sakta.
Sarâwak. See Brooke.
Sarcocolla, Penæa mucronata.
Sarcostemma. See Homa; Soma.
Sarda, Paliz, PUSHTU, Cucumis melo.
Sardines. See Fish Roe.
Saree. See Clothing, 747, 748.
Sargassum, Gulf-weed, Sea-weeds.
Sarguja. See Bisrampur.
Sarik. See Turkoman.
Sar-i-Pul. See Afghanistan.
Sar kuchu, BENG., Colocasia nymphæfolia.
Sar-lakhtei, TR.-INDUS, Andromeda ovalifolia.
Saro, Sarv, HIND., PERS., Cupressus sempervirens.
Saros. See Chaldæa, 642.
Sarosh. See Parsee.
Sar-pankha, HIND., Tephrosia purpurea.
Sarsel, HIND., Porcupine.
Sart. See Iranian Races.
Saru, BENG., Porcupine.
Sarv, HIND., PERS., Cypress.
Sarwari, Sar-pankha, HIND., Celosia argentea.
Sarwaria, Kanaujia.
Sassanide princes—Hormuz, Persia.
Satari, Aruda, HIND., Ruta graveolens.
Satasanda, SINGH., Aristolochia Indica.
Satbhai, HIND., Oxylophus melanoleucos.
Satha-kuppa, TAM., Anethum sowa.
Sathung, LEPCH., Hystrix longicaudus.
Satin-wood, Chloroxylon Swietenia.
Satnami, Rai Das.
Sa-too, DUKH., Hordeum hexastichon.
Satpura plateau. See Central Provinces; Mountains, i. 449.
Satrunjaya, Jain.
Saturnalia. See Carnival.
Saturnia. See Bombyx, 412.
Satya nasa, HIND., Argemone Mexicana.
Satyavati. See Pandu.
Satzarra, SUTLEJ, Asparagus filicinus.
Saurashtra. See Kattyawar.
Sauria. See Reptiles.
Saurus. See Fishes, 1116.
Sauvira tribes, Jayadratha.
Savara. See Bendkar.
Savee Cheena-wari, HIND., Panicum.
Savia actephila, Actephila Neilgherrensis.
Savirela chettu, TEL., Pæderia fœtida.
Sawa. See Kariang.
Sawarrow nut, Caryocar butyrosum.
Saw-flies. See Insects.
Sayana. See Jain.
Sayor callapa, Cycas circinalis.
Scabrita scabra, Nyctanthes arbortristis.
Scalp lock. See Hindu, 74; Kudumi.
Scarfs. See Clothing, 747.
Scavenger birds, *sp.* of Neophron.
Schinus Bengalensis, Canarium sylvestre.
Schinus Bengalensis, Icica Indica.
Schmeilat. See Bedouin Tribes.
Scho, TEL., Arenga saccharifera.
Schools. See Hindus, 68; Patshala.
Scincidæ. See Reptiles.
Scirpeæ. See Cyperaceæ.
Sciuridæ. See Mammals; Pteromys.
Sclave. See Bulgarian.
Scolopax, Woodcock. See Scolopacidæ.
Scomber thynnus, the albicore. See Fishes.
Scotophilinæ. See Cheiroptera; Mammals.
Screech owl, Phodilus badius.
Screw-pine, Pandanus odoratissimus.
Screw-plant, Helicteres isora, Isora corylifolia.
Scutia Indica, a hedge plant.
Scutia paniculata, Celastrus paniculatus.
Scutinanthe brunnea, Canarium brunneum.
Scylax. See Darius.
Scytalia lichi, Nephelium litchi.
Scytalia longana, Euphoria longana.
Scythian tribes. See Bactria; Saka.
Sea-bear, Arctocephalus lobatus.
Sea-cocoanut, Lodoicea Seychellarum and Xylocarpus granatum.
Sea-cucumber, ENG., Holothuria.
Sea-eagles, Pandion haliætus, Poliœtus ichthyœtus, Haliætus fulviventer, H. leucogaster.
Sea-horse. See Syngnathidæ.
Sea-lion, Otaria jubata.
Sea pink, Spinifex squarrosa.
Sea-slug, Holothuria, Trepang.
Sea-snakes, Hydrophidæ.
Sea-weed, Fucaceæ, Laminaria, Algæ, Sargassum, Ceylon moss.
Seasons. See Hindustan, 77.
Seb, Seo, HIND., PERS., Pyrus malus, Apple.
Sebera, Siberia. See Brej.
Sects. See Hindus, 72.
Sedasheo Rao. See Paniput.
Seer fish. See Fishes, 1118.
Seet, BURM., *sp.* of Acacia.
Seetha. See Brej; Siberia.
Segapu, Tovaray Purpoo, TAM., Cajanus Indicus.
Segapu averai kai, TAM., Lablab vulgare.
Segestani. See Iranian Races.
Seing, BURM., Aqua marine.
Seistan, Desert district. See Afghanistan; Baluchistan.
Selangor. See Malay Peninsula.
Sela wunjah, TAM., Albizzia odoratissima.
Seleucia. See Babylonia; Ctesiphon.
Seleucides alba. See Paradise Birds.
Seleucus. See Bactria, 221; Persia.
Seljuk dynasty. See Khalifah.
Selya. See Clothing, 748.
Semang Paya, Kedah — Malay Peninsula.
Semioptera Wallacei, Paradise birds.
Sem ke phalle, DUKH., Lablab vulgare.
Semnopithecus, Presbytis jubatus.
Semones, Penates.
Senan. See Abu Said.
Sendh, HIND., Euphorbia tiraculli.
Sendi, HIND., Phœnix sylvestris.
Senecio sonchifolia, Emilia sonchifolia.
Senna. See Cassia.
Sensar pal, SUTLEJ, Asparagus filicinus.
Se'pa chettu, TEL., Oxystelma esculentum.
Sepistan, Cordia angustifolia.
Sepudday, MALAY, Aplotaxis auriculata.
Sequiera. See Portugal.
Sequin—Kanya.
Serag-ul-koshrob, ARAB., Mandrake.
Seraikella. See Rajputs.
Sergulla. See Chaldæa, 641-42.
Serioulout, MALAY, Pterospermum Indicum.
Ser Matsya. See Ichthyophagi.
Serosh, the angel of the Zoroastrians, who helps the souls of the good over the Chinvat neretu, bridge for the good.
Serow, HIND., Nemorrhœdus bubalina.
Serpent eagles, *sp.* of Circaetus and Spilornis.
Serpent race, or Nagabansa, Tak.
Serpent stick, Staphylea emodi.
Serpent stone, Bezoar.
Serpicula verticellata, Vallisneria spiralis.
Serratula anthelmintica, Vernonia anthelmintica.
Sesamum oil, Gingelly oil.
Sesha. See Adi Sesha.
Seshnaga dynasty. See Bharata.
Sesonchosus. See Horse.
Sesostris canal. See Commerce.
Se sze, CHIN. See Coins, 780.
Seta-ver, HIND., LAHORE, Asparagus adscendens.
Seth, Seetha, or Siberia. See Brej.
Severndrug. See Angria.
Seyr teg, MAHR., Euphorbia tiraculli.
Sezai. See Afghanistan.
Sha, Shapoo, Caprovis Vignei.
Sha-bin, BURM., Acacia catechu.
Shab-para, PERS., Bats, Cheiroptera, Mammalia.
Shada hurburija, BENG., Gynandropsis pentaphylla.
Shaddock, Pummalo, ENG., Citrus decumana.
Shadgrandika, TEL., Curcuma amada.
Shadida kalli, MALEAL., Euphorbia antiquorum.
Shadilingam, TAM., Cinnabar.
Shadizai. See Afghanistan.
Shafi, Imam.
Shaft-alu, PERS., Amygdalus Persica.
Shagali of Chenab, Indigofera heterantha.
Shaghal, ARAB., Jackal.
Shah, BURM., Catechu.
Shahabad. See Carpets; Kymore.
Shah-bakha, HIND., a basket-hilted sword.
Shah-baz, HIND., Limnaetus cristatellus.
Shah Dehri. See Cave Temples, 611.
Shahin, HIND., Falco peregrinator.
Shah Namah. See Ferdusi.
Shahpur. See Hormuz; Sapor.
Shah Rukh. See Abd-ur-Razzaq; Ormuz.
Shah zira, DUKH., Cumin seed.
Shah zuhur. See Muhammadanism.
Shaikh Abul Faiz. See Akbar; Faizi.
Shaikh Farid. See Dargah.
Shaikh Syed Burhan-ud-Din. See Sufi.

Shaik-ul-Jabal. See Alamut; Ismaili; Karamati; Old Man.
Shair-ul-jin, ARAB., Adiantum capillus veneris.
Sha-jin-kuh, CHIN., Amomum xanthoides.
Shajrah-miriam, ARAB., Cyclamen.
Shajrat-ul-Kudus—Kalpa-vriksha.
Shajr-ul-hyat, ARAB., Cupressus sempervirens.
Shak, BENG., Greens, Amarantus.
Shakakul, DUKH., Asparagus racemosus.
Shakatayana—Jaimini.
Shakr-kand-alu, BENG., Batatas edulis.
Shal. See Baluchistan.
Shalgam, BENG., PERS., Brassica.
Shama, HIND., Cercotrichas macrourus, Kittacincla macroura, Copsychus, *sp.* See Bulbul.
Shama, BENG., Oplismenus.
Shamdulum, BENG., Elephantopus scaber.
Shami, Shuni, BENG., Prosopis spicigera.
Shammar. See Bedouin.
Shampong. See Carriage.
Shamsher, HIND., a sword with a side-guard. See Armour.
Shams-ud-Din. See Muhammadanism.
Shan. See Burma, i. 526.
Shanbogue, Sana-bhoga.
Shan-cha, CHIN., Cratægus pinnatifida.
Shan-cha-yo, CHIN., Cornus officinalis.
Shan-chi-tsze, CHIN., Gardenia florida.
Shandoo, a tribe on the Arakan Hills, Kha-mi.
Shang, TR.-IND., Fraxinus xanthoxylloides.
Shangharf, DUKH., Cinnabar.
Shan-yoh, CHIN., Dioscorea sativa.
Shapoo. See Parsee.
Sharf Namah, Istakhr.
Sharifa, HIND., Anona squamosa.
Sharif bu Ali Jalandar, Muhammadanism.
Shariva, SANSK., Sarsaparilla.
Shark, Zygæna, *sp.* See Fishes.
Sharkara kunda, SANSK., Convolvulus batatas.
Sharmandi billi, HIND., Nycticebus tardigradus.
Sharoi, Sharoli, PANJ., Corylus colurna.
Sharvalay kiray, TAM., Trianthema obcordatum.
Shatha-kuppa, TEL., Anethum sowa.
Shatranji, HIND., Carpets, Rugs.
Sha-ts'au, CHIN., Cyperus esculentus.
Shat-ul-Hie. See Chaldæa, 641; Euphrates; Tigris.
Shau-chau-fu, CHIN., Camphor.
Shawl goat, Capra ægagrus.
Shawl-wool, Par-i-taos, Pat.
Shawls. See Arts, 172; Cashmere; Kirman.
Shaw-nee, BURM., Sterculia alata.
Shayraat-koochie, TAM., Ophelia chirata.
Sha soung, BURM., Euphorbia ligularia.
Shea tree, Bassia Parkii. See Oils.
Sheep. See Bovidæ; Mammalia.
Shell bracelets. See Carving; Jewellery.
Shembugha, TAM., Michelia champaca.
Shemlit, PERS., Trigonella fœnum græcum.
Shem maram, TAM., Amoora rohituka.
Shendu. See Burma; Heuma.
Sheng-pa. See Kakhyen.
Shen Shiu. See Literature.
Shen Tamil or Sen Damir, a classical form of Tamil.
Sheora, BENG., Epicarpus orientalis.
Sheora gach'h, BENG., Trophis aspera.
Sheorani. See Afghanistan.
Shepherd kings. See Hyksos.
Shepherd's purse, Capsella bursa pastoris.
Shepherd's tinder, Chaptalia gossypina.
Sher, PERS., Honey of raisins.
Sher, HIND., Felis leo.
Sherawane, PUSHTU. See Rhamneæ.
Sherif of Mecca. See Celibacy.
Shetti, MALEAL., Ixora coccinea.
Shevadi, TAM., Ipomœa turpethum.
Shevenar vembu, TAM., Indigofera aspalathoides.
Shia bandar, HIND., Inuus silenus.
Shiag. See Deserts, 920.
Shibbargam. See Afghanistan.
Shie-hwang, CHIN., Gamboge.
Shie-kan, CHIN., Pardanthus Chinensis.
Shieldrake, Casarca rutila, C. leucoptera, Tadorna vulpanser.
Shih-chu-yu, CHIN., Sumach.
Shih-huh, CHIN., Dendrobium cerasa.
Shih-hwang, CHIN., Orpiment.
Shih jui, CHIN., Lecanora tartarica.
Shih-kiueh-ming, CHIN., Haliotidæ.
Shih-lan-yu, Shih ts'ih, CHIN., Momiai.
Shih-li, CHIN., Aleurites triloba.
Shih-luh, CHIN., Malachite.
Shih-wha-tsai, CHIN., Ceylon moss.
Shikai, TAM., Acacia rugata.
Shikra, HIND., Micronesius badius.
Shilandi arisi, TAM., Cyperus bulbosus.
Shim, Som-shing, CHENAB, Pinus.
Shim, BENG., Lablab cultratum.
Shima punji, MALEAL., Cochlospermum gossypium.
Shim-batrajee, BENG., Dolichos glutinosus.
Shin, BENG., Psophocarpus tetragonolobus.
Shina, Mulen shina, CAN., Amorphophallus campanulatus.
Shinar. See Chaldæa; Tak-i-Kesra.
Shingle tree, Acrocarpus fraxinifolius.
Shin-je, TIB., Choigal.
Shinwari. See Afghanistan; Khaibar.
Shinz kubi, BRAHUI, Alhagi maurorum.
Shiona, HIND., Calosanthes Indica.
Shirash, BEAS, Carpinus viminea.
Shirhawati. See Cataracts; Waterfall.
Shirian, HIND., Fungus, Mushroom.
Shisham, PANJ., Dalbergia sissoo.
Shoe-flower, Hibiscus rosa Sinensis.
Shokran, ARAB., Conium maculatum.
Shola, also Sola, HIND., Æschynomene aspera.
Shora-pati, Lord of the Oxen title.
Shorea robusta, Vatica robusta.
Shou, TIB., Cervus affinis.
Shoveller, Spatula clypeata.
Shrews, *sp.* of the family Soricidæ, genus Soriculus and genus Sorex.
Shrimps. See Palæmonidæ.
Shrotriya Brahmans, i. 435.
Shudukadu, TAM., Smasan, Marghat.
Shuh-sha-mih, CHIN., Amomum xanthoides.
Shuh-tsiau, Xanthoxylon alatum.
Shuh-yang-ts'inen, Solanum dulcamara.
Shui-chang-pu, Acorus calamus.
Shuk-China, BENG., Smilax Chinensis.
Shu-lah, Wax insect.
Shumbali, DUKH., Vitex negundo.
Shumuk, PERS., Rhus coriaria.
Shunda pana, MALEAL., Caryota urens.
Shunez, Hub-sindi, ARAB., Nigella sativa.
Shunlit, PERS., Fenugreek seed.
Shuo-wen, Chinese Dictionary by Hsu-Shen.
Shur, Sura, Sar, HIND., Saccharum sara.
Shur of Chenab, Juniperus excelsa.
Shuria mukti, BENG., Helianthus annuus.
Shurk-aloo, HIND., Pachyrhizus angulatus.
Shurlige, Bankimu, PANJ., Corylus colurna.
Shu-sha-jin, CHIN., Amomum xanthoides.
Shuta puspha, HIND., Anethum sowa.
Shuthi, Ban haldi, BENG., Curcuma zedoaria.
Shutr-murgh, PERS., Ostrich.
Shutur-khar, PERS., Alhagi maurorum.
Shu-yu, CHIN., Dioscorea triphylla.
Shwæ pha yung, BURM., Cucurbita maxima.
Shwet akund, BENG., Calotropis gigantea.
Shwet-bach, BENG., Acorus calamus.
Shwet-bariala, Sida rhomboidea.
Shwet-busunda, Acalypha Indica.
Shwui-sie, CHIN., Alisma plantago.
Shwui-yin, Tan-sha, CHIN., Cinnabar.
Shyama luta, BENG., Ichnocarpus frutescens.
Siah-bandar, HIND. See Papioninæ.
Siah-dana, PERS., Nigella sativa.
Siah-gosh, HIND., Felis caracal.
Siah musli, Curculigo orchioides.
Siamese. See Burial Customs, i. 523; Khampti.
Siang-pi, CHIN., Caoutchouc.
Siang-sz-tsze, CHIN., Abrus precctorius.
Siau. See Celebes.
Siau-hwui-hiang, CHIN., Aniseed.
Sibr, also Sabr, ARAB., Aloes.
Sibundi doli. See Koel.
Si-chang-tan, CHIN., Areca catechu.
Sicka, HIND., Hovenia dulcis.
Sidalam, TEL., Corypha umbraculifera.
Sidda-ki, TIB., Cuon rutilans.
Sidhi. See Cannabis.
Sidsiafi, MARIAN ISLANDS, Rhea.
Siekran, ARAB., PERS., Hyosciamus niger.
Sigapu shandanum, TAM., Pterocarpus santalinus.
Siharu, PANJ., Boehmeria salicifolia.
Sij, BENG., Euphorbia antiquorum.
Siju, KANGRA, Fraxinus xanthoxylloides.
Sikat yelli, TEL. See Pteropodidæ.
Sikaya, TEL., Acacia rugata.
Sikerwal—Rajputs.
Sikurayi, TEL., Pteropus Edwardsii.
Siladitya. See Jain.
Silaramba, SANSK., Canna Indica.

Silasanam, SANSK., Inscriptions on stones. See Architecture, 145.
Silassattu, TEL., Agathotes cherayta.
Silenus veter, Inuus silenus.
Sili, SIND., Plotus melanogaster.
Silk cotton tree, Cochlospermum gossypium.
Silk-worms. See Bombycina.
Sillarus, HIND.? Liquid storax.
Silpagiri. See Bijala; King of Kalyani.
Silundia Gangetica, Silond, BENG.
Siluroids. See Fishes, 1114.
Sima. See Divination; Ordeal.
Sima avisi, TEL., Cassia alata.
Sima chinduga, TEL., Inga dulcis.
Sima ippa chettu, TEL., Achras sapota.
Simai-pusini kai, TAM., Cucurbita ovifera.
Sima-kirai, TAM., Colocasia esculenta.
Simal, HIND., Bombax Malabaricum.
Simeon Seth. See Bidpai.
Simia leonina, Inuus silenus.
Sim-kukra, Sim-titar, HIND., Woodcock.
Simorri. See Cataract.
Simugh b'us-shirin, PERS., Dorema ammoniacum.
Sin, or Hurki, the moon-god of the Chaldees.
Sind. See Feudatory; Hyderabad, 135; Languages.
Sindia. See Feudatory; Hindustan, 80.
Sindoorum, TAM., Red lead.
Singally, Sozilly, BENG., Fish maws.
Singhara, BENG., HIND., Trapa bispinosa.
Singpho—Kampti.
Singrowla of Nepal, Cassia lignea.
Sinhala, Sculptures.
Sinh-ka-bab, Indus river.
Sin-lih, Pan-lih, CHIN., Chestnuts.
Siphonaceæ, Sea-weeds.
Siphonanthus Indica, Clerodendron siphonanthus.
Siphonia elastica. See Caoutchouc.
Sir, Sil, Bharwi, PANJ., Imperata Koenigii.
Sirafi. See Abu Zaid.
Siragum, TAM., Cumin seed.
Sira-shengalnir, TAM., Vernonia cinerea.
Sirex gigas, White borer. See Borer.
Sirguja. See Chutia Nagpur; Oraon.
Sirhind Canal. See Canals.
Siriari, HIND., Tiaridium Indicum.
Sir-i-Kul (Lake). See Oxus.
Siri manu, TEL., Conocarpus latifolia.
Siri-pala. See Palli.
Sirisha, BENG., Acacia speciosa.
Sirmur. See Hill States.
Sirohi, Hindustan, 81.
Sirru corrutti-vayr, TAM., Trichosanthes incisa.
Sirru kalangu, TAM., Plectranthus rugosus.
Sirru kattalay, TAM., Aloe litoralis.
Sirru kura, TEL., Amarantus campestris.
Sirru pulai, TAM., Ærua lanata.
Sirru-vullie-kalangu, TAM., Dioscorea aculeata.
Sisan, SIND., Crocodile.
Si-sha-jin, CHIN., Amomum xanthoides.
Sisik panu, MALAY, Tortoise-shell.
Sison ammi, Bishop's-weed seed.
Sissoo of Bombay, Dalbergia latifolia.
Sisyphus. See Copridæ; Insects.
Sitabari. Hot Springs, 113.
Sitana, sp. See Bloodsucker.
Sitang—Rivers, Bore.
Sitapa chettu, TEL., Smilax ovalifolia.
Sita phal, DEKH., Anona squamosa.
Sitawar, SUTLEJ, Asparagus filicinus.
Sitophilus oryzæ. See Insects; Weevils.
Siura, HIND., Epicarpus orientalis.
Siva gyanmut—Hindu, 72.
Sivun, Shewun, HIND., Gmelina arborea.
Siwah. See Jupiter Ammon.
Siwalik. See Fossils; Himalaya; Mountains.
Sjeria samstravadi, MAL., Barringtonia acutangula.
Skanda, Kartikeya.
Skimmer, Rhynchops albicollis.
Skimmi, JAPAN, Illicium anisatum.
Skin, Sakin, HIM., Capra sibirica.
Skodze, LADAKH, Allium sphærocephalum.
Sleinanachd of the Celts. See Divination.
Slevogtia verticillata, Cicendia Hyssopifolia.
Sloth, Lemur gracilis, Lemuridæ, Mammalia.
Sloth bear, Ursus labiatus.
Slug. See Bornella digitata.
Smew, Mergus albellus.
Smilax aspera, Hemidesmus Indicus.
Smriti, HIND., Law.
Smut. See Blight.
Snake bird. See Plotus melanogaster.
Snake gourd, ENG., Trichosanthes anguina.
Snake-stick, Staphylæa emodi.
Snake-wood tree, Strychnos nux vomica.
Snakes, Reptiles, Serpent.
Snat'haka varattam. See Hindu, 67.
Snipe. See Gallinago; Scolopacidæ.
Snow cock, Tetraogallus Himalayensis.
Snow leopard, Felis uncia.
Snow partridge, sp. of Lerwa.
Snow pheasant. See Phasianidæ; Pheasant.
Soap acacia, Acacia rugata.
Soap-nut tree, Sapindus detergens.
Soap-stone, Steatite.
Soarez de Albergaria. See Portugal.
Sochul, HIND., Bit-laban.
Soda. See Cutch; Deserts, 920; Pramara; Rajput; Reh.
Sogdiana. See Aryan, 176; Hun.
Sohag canal. See Canals.
Sohaga, HIND., Borax.
Sohanjana, BENG., Moringa pterygosperma.
Sohni, a Bedouin tribe.
Sohun, Guganbher, HIND., Eupodotis Edwardsii.
Soils of India. See Husbandry, 127.
Sokapan. See Borneo, 419.
Solar dynasty. See Lunar Dynasty; Sun; Rajput; Sun-worship.
Solara, PANJ., Cymbopogon laniger.
So-lo-tsze, CHIN., Æsculus Chinensis.
Som, Soma, HIND., Sarcostemma.
Soma-lata, Brahmu, SANSK., Ruta graveolens.
Somavalli, Jewanti, TEL., Tinospora cordifolia.
Somendilla, SINGH., Berrya ammonilla.
So'minta, TEL., Sesbania Ægyptiaca.
Somnatpur. See Architecture, 146.
Son or Sugum. See Divination.
Sonaghar. See Architecture, 146; Jain.
Sona-pat, BENG., Cassia elongata.
Sonari. See Bhilsa.
Sondali, Sonalu, BENG., Cathartocarpus fistula.
Sone. See Coal, 752; Suvarna.
Sonf, HIND., Fœniculum vulgare.
Sonnerat. See Botany.
Sonth (dry ginger), MALAY, Zingiber officinale.
Soojie. See Bread.
Sook China, BENG., China root.
Sootash, TURK, Jade.
Sophir. See Ophir.
Sophytes. See Bactria, 221.
Sorakaia, TEL., Lagenaria vulgaris.
Soramandalam. See Arcot; Chola.
Sora panji-gadur, TEL., Golunda Elliotti.
Sorrel, Oxalidaceæ.
Sorupenka, TEL., Cuttle-fish bone.
Sosan, HIND., Iris florentina.
Soter megas. See Bactria, 223.
Sounds, Swim, ENG., Isinglass.
Sourah. Burial Customs, i. 521.
Sour-sop, Anona muricata.
Sou-sou, HIND., Platanista Gangetica.
Soussi. See Bodice, 403.
South Sea chestnut, Inocarpus edulis.
Southern India. See Hill Tracts.
Sowa, Sui-chuka, HIND., Anethum graveolens.
Soya, HIND., Anethum sowa.
Soy-bean, Soja hispida.
Sozili, GUJ., HIND., Fish maws.
Spalaghzai, N.W. HIM., Fagonia cretica.
Spalyrius. See Bactria, 223.
Spanish Indies. See Philippine.
Sparrow-hawk, Accipiter nisus and A. virgatus, Kestrel.
Sparrows, sp. of the Passerinæ.
Spathodea Indica, Bignonia Indica.
Spear grass, ENG., Chrysopogon aciculatis.
Spectre insects. See Phasma.
Spelane, TR.-INDUS, Peganum harmala.
Sperm whales. See Cetacea; Ivory; Whales.
Sphænophorus planipennis, Weevils.
Sphærococcus lichenoides. See Sea-weeds.
Sphærosacme rohituka, Amoora rohituka.
Sphegidæ. See Insects; Wasp.
Sphyrænæ. See Fishes, 1118.
Spice Islands. See Archipelago, 135.
Spider crab, Haliotis gigantea of Japan.
Spider hunters, Arachnothera, sp.
Spider worts, Commelynaceæ.
Spiders. See Galeodes.
Spilornis. See Eagle.
Spindle trees, Celastraceæ.
Sping, Gorwa of Sutlej, Arundinaria falcata.
Spinifex squarrosus, Sand-binding plants.
Spin Tarin. See Afghanistan.
Spirit-worship. See Central Provinces.
Spirits. See Demon; Preta.
Spondias elliptica, Buchanania latifolia.
Sponge. See Venus flower-basket; Zoophyte.
Sponia orientalis, Celtis orientalis.
Spoon-bill, Platalea leucorodia.
Spotted deer, Axis maculatus.
Sprat, poisonous. See Clupeidæ, Fishes.
Spunk. See Amadou.
Spur fowl, sp. of Gallus, Galloperdix. See Phasianidæ.
Spurge, Euphorbia lathyris.

Spurge-olive, Daphne mezereum.
Squalus fulgens. See Fishes; Phosphorescence.
Squids. See Calamaries; Cuttle-fish.
Squirrels, *sp.* of the Sciuridæ, genera Sciurus, Pteromys, Sciuropterus.
Srad'ha. See Bhut; Hindus, 69; Preta.
Sri kaya, MALAY, Anona squamosa.
Sri mali pattan. See Oswal.
Srinaggar. See Cashmere.
Sringa takamu, TEL., Trapa bispinosa.
Sringeri. See Adwaita.
Sripada. See Hindus, 65.
Sri phal, BENG., Ægle marmelos.
Sri-p'hala. See Phallus.
Srirangam. See Cauvery.
Sri talam, TEL., Corypha taliera.
Sri-Vaishnava. See Siva; Vira Saiva.
Sri Yeo, the holy spirit. See Arka Bandhu.
Srol, Sawali, Silein, KANG., Alnus nitida.
Staff tree, Celastrus paniculatus.
Stag. See Cervus; Mammalia.
Standards, Ox-tail.
Star-anise, Illicium anisatum.
Star-apple, Chrysophyllum Roxburghii.
Star-fish. See Phosphorescence.
Star-stones. See Precious Stones.
Starga of Ladakh, Juglans regia.
Starling. See Sturnidæ.
Stasanor. See Bactria, 221.
Stawin, MAHR., Alstonia scholaris.
Steno. See Cetacea; Delphinidæ.
Stenops Javanicus, Nycticebus tardigradus.
Stephanus of Byzantium. See Oritæ.
Stereospermum chelonoides, Bignonia chelonoides.
Steris aquatica, Hydrolea Zeylanica.
St'hamba. See Architecture, 143.
Sth'nanam, TAM., TEL. See Abhyangana; Ablution; Bathing.
Stilago bunias, Antidesma bunias.
Stomatapodes. See Crustacea.
Stonechat, *sp.* of Saxicola.
Storax, Liquidambar, Rose maloes.
Storks, *sp.* of Ciconia, Mycteria, and Leptoptilos.
Strachia geometrica. See Coffee Planting, 773.
Strœmia tetrandra, Cadaba Indica.
Stratiotes alismoides, Hydrocharis cellulosa, Ottelia alismoides.
Strato. See Bactria, 222.
Stravadium rubrum, Barringtonia acutangula.
Streptostigma viridiflorum, Harpullia imbricata.
Strobilanthus. See Dyes.
Stromateus. See Fishes, 1116.
Stump. See Coffee Planting, 776.
Stylanthus Thwaitsii, Podadenia sepida.
Styloceros muntjac. See Cervidæ.
Stylocoryne Webera, Webera corymbosa.
Stylodiscus trifoliatus, Bischoffia Javanica, Andrachne trifoliata.
Styx of the Hindus, the Baitarani river of Orissa. See Bridge.
Su—Suevi.
Suari. See Bendkar.
Sub'h-i-kazib, PERS., Dawn.
Subhramanya. See Skanda.
Subunreka. See Cataracts; Sirguja; Waterfall.
Suchal-hand, CHENAB, Cichorium intybus.
Sucking-fish, Echeneis remora.
Sudab, ARAB., Ruta graveolens.
Sudab, HIND., Euphorbia lathyris.
Sudan. See Kashmir.
Sudi. See Panchanga.
Suez Canal. See Commerce, 789.
Suganda pala, TEL., Hemidesmus Indicus.
Sugoria, HIND., Hog-deer.
Suhi gandhal, PANJ., Boucerosia edulis.
Suh-muh, CHIN., Cæsalpinia sappan.
Su-hoh-hiang, CHIN., Storax, Rose maloes.
Suhu, LEPCH., Inuus rhesus.
Suhu-tum, LEPCH., Cuon rutilans.
Suji, JAPAN, Cryptomeria.
Sukan kire, TAM., Rumex acetosa.
Suk-chain, PANJ., Pongamia glabra.
Sukh dursun, BENG., Crinum Asiaticum.
Sukkur. See Bakkar.
Suknam, Sunnam, LEPCH., Ailurus fulgens.
Sukun, Kluwi, MALAY, Artocarpus integrifolius.
Sulaiman. See Abu Zaid.
Sulpha, BENG., Anethum sowa.
Sultan Sarwar. See Muhammadanism.
Sum, JHELUM, Fraxinus floribunda.
Sum, PANJ., Bombax Malabaricum.
Sumaicha. See Deserts, 920.
Sumandar soh, HIND., Letsomia nervosa.
Sumbul, ARAB, HIND., Nardostachys jatamansi.
Sumbulpur. See Chutia Nagpur; Sirguja.
Sum bun, JAV., Blumea balsamifera.
Summers. See Begum Samroo.
Sumra. See Deserts, 920; Pramara.
Sumsan or Smasan, Hindu Cremation Place. See Chiwana.
Sum-ul-Far, Shuk, ARAB., Arsenic.
Sun birds, Honey-suckers, *sp.* of the family Nectarinidæ.
Suna, ARAB., Cassia lanceolata.
Sunbul, ARAB., Spikenard.
Sunday-kai, TAM., Solanum pubescens.
Sundi, BENG., Nymphæa stellata.
Sundip channel. See Bore.
Sundri, BENG., Heritiera minor.
Sundur, HIND., Minium, Red lead.
Sundur. See Hindustan, 81.
Sung-chi, CHIN., Resins.
Sungei Ujong. See Malay Peninsula.
Sung-yun. See Parashawara.
Sunker chil, BENG., Haliastur Indus.
Sunkeswaram, TEL., Poinciana elata.
Sunkjiri, Sunkjeeru, HIND., Soapstone.
Sunnam, LEPCH., Ailurus fulgens.
Sunni sect. See Khalifah; Muhammadanism.
Sunnu, Tsunnu, KANGRA, Amygdalus Persica.
Sunnu, RAVI, Fraxinus floribunda.
Sun-worship. See Adonai; Sutrapada.
Supari, HIND., Areca catechu.
Suphura kumra, BENG., Cucurbita maxima.
Sura. See Kol.
Surabhi. See Cow; Kama Dhenu.
Suraj khand. See Confervæ; Hot Springs, 113.
Suraj mukhi, HIND., Helianthus annuus.
Surbo jaya, BENG., Canna Indica.
Suri-kanda, TEL., Typhonium orixense.
Surkh-vasooka, HIND., Graptophyllum hortense.
Surma, DUKH., PERS., Sulphuret of antimony.
Surri mara, SINGH., Albizzia odoratissima.
Sur-sinjli, JHELUM, Cratægus oxyacantha.
Surun, MAHR., HIND., Colocasia esculenta.
Surwala, HIND., Chrysopogon aciculatis.
Surya kanti chettu, TEL., Ionidium suffruticosum.
Surya-kund—Tapta-kund.
Suryavansa. See Orissa; Solar Race.
Susa in Khuzistan. See Choaspes.
Susa, Süsük, Sishuk, HIND., Platanista Gangetica, Cetacea.
Susanjird. See Carpets.
Susi. See Cloths.
Susni-shak, BENG., Marsilea quadrifolia.
Susuh, JAV., Bird nests.
Suta muli, BENG., SANSK., Asparagus racemosus.
Sutash, TURK. See Yuh.
Sutjira, Agareh, HIND., Achyranthes aspera.
Sutlej. See Boats; Canal; Himalaya; Hot Springs, 111.
Sutrunjiya. See Architecture, 145.
Suvarna Bhumi. See Chryse.
Suvarnuka, SANSK., Cathartocarpus fistula.
Swala, JAPAN, Holothuria.
Swallow wort, Calotropis gigantea.
Swallows. See Hirundinidæ.
Swamp deer, Rucervus Duvaucelli.
Swarga, Hindu, 66, 67; Indra-Loka.
Swastika. See Cross.
Swâyamvara. See Adhigachhed. At the tournament (Swûyamvara) of Draupadi, she was won by Arjuna, and became the wife of the five brothers, who arranged that she should stay two days alternately with each, the master of the house alone entering it during that time. But Arjuna accidentally broke the rule, for, hearing an alarm of robbery, he rushed into Dhritarashtra's house to rescue the arms, whilst Draupadi was present, and departed into exile.
Sweet bay, Laurel.
Sweet flag, Acorus calamus.
Sweet potato, Batatas edulis.
Sweet-rush, ENG., Andropogon schœnanthus.
Sweet sop, Anona squamosa.
Swertia angustifolia, Ophelia angustifolia.
Swertia cheyrata, Agathotes chirayta.
Swetambara. See Jain.
Swietenia chickrassa, Chickrassia tabularis.
Swietenia chloroxylon, Chloroxylon Swietenia.
Swietenia febrifuga, Soymida febrifuga.
Swifts, *sp.* of the Cypselinæ.
Swim. See Air-bladders; Fish Maws; Isinglass.
Sword. See Armour, 162.
Sword bean, Canavalia gladiata; Wild do., C. virosa.
Sword-fish, Histiophorus. See Fishes.
Syama. See Cerbera; Yama.
Syamali, TEL., Helicteres isora.
Sycee. See Coins.
Sykes, Colonel. See Birds, 367.
Sylvia philomela, Philomela turdoides.
Syn-teng. See I. 449; Hills.

Sypheotides Bengalensis. See Birds; Bustard.
Syr Darya. See Central Asia, 619.
Syria. See Greece.
Syringa plants. See Philadelphaceæ.
Syrnium Indrani, Devil bird.
Syzygium jambolanum, Eugenia jambolana.
Sz, Tsz, CHIN., Diospyros kaki.
Szu-Tartars. See Hun.

T

TAAG, also Tag, BENG., HIND., Crotalaria juncea.
Taaleb, ARAB., Fox.
Taam, ARAB., Food.
Tabalbar, HIND., a brass bowl.
Taban, also Niato, MALAY, the Gutta-percha tree, Isonandra gutta.
Taba-neboo, BENG., HIND., Citrus acida, C. bergamia (a variety).
Tabar, HIND., Battle-axe.
Tabashiri rang, HIND., Pale yellow, with tone of blue.
Tabasi, TEL., Cavallium urens.
Tabati, TEL., Mallea Rothii.
Tabernæmontana densiflora, Ophioxylon densiflorum.
Tabi, MALAY, Pepper, Long pepper.
Tabia, BALI, Cayenne pepper.
Tabki hurtal, HIND., Hurtal.
Taboo. See Chank.
Tacca liker, MALAY, Tacca pinnatifida.
Tachash, HEB., Badger.
Ta cheng, or Mahayana. See Tibet.
Tachxudogbo, COCHIN-CHIN., Acorus calamus, Sweet flag.
Tachypotes aquila, Frigate bird.
Tachyros zarinda, of Celebes, a rare butterfly with cinnabar red wings.
Tada chettu, TEL., Grewia tiliæfolia.
Tadagunni, CAN., Dolichos catjang.
Tadala, SINGH., Colocasia antiquorum.
Taddi maram, TAM., Pterospermum tuberiflorum.
Tadhal. See Cannabis sativa.
Tadi chettu, TEL., Terminalia bellerica.
Tadmor, ARAB. See Baalbec; Palmyra.
Tadpole, Pha-laung.
Tadrelu, HIND., Coriaria Nepalensis, also Barleria cristata.
Tadru, HIND., Rhamnus purpureus, also R. virgatus.
Tæmbilo, SINGH., Cocos nucifera.
Taemuni. See Iranian Races.
Taemuri. See Iranian Races.
Tafta, a kind of silk cloth.
Ta-fung-tze, CHIN., Gynocardia odorata.
Tagabaloy, a tribe in Mindanao.
Tagada, TEL., Bignonia chelonoides.
Tagada tunga, TEL., Cyperus dubius.
Tagala. See Archipelago, 138; Ilooo; Philippines.
Tagara, MALEAL., TAM., Cassia tora.
Tagara. See Paitan.
Tagaram, TAM., TEL., Tin.
Tagaru, TEL., Morinda tinctoria.
Tagashai, Tagaray, TAM., Cassia tora.
Tagetes. See Dyes.
Taggar, HIND., Valeriana Hardwickii and V. Wallichii.
Taghalaq. See Feroz.
Taghan. See Kafir.
Taghar, HIND, Calotropis procera.
Tagho, HIND., Pistacia Atlantica, also Celtis Caucasica and C. Nepalensis.
Taghun or Takpun, PUSHTU, Celtis Caucasica, Nettle tree.
Tagor. See Brahmans, 431.
Tag-pa, BHOT., Birch, Betula bhojputra.
Tagu-muda, TEL., Gmelina arborea.
Ta-hat, BURM., Tectona ternifolia.
Tahir-hay of Himalaya, Felis pardus.
Tahtah, HIND., PERS., the Tartar.
Ta-hwai-hiang, CHIN., Star-anise.
Ta-hwang, CHIN., Rhubarb.;
Taingri nuren, MAL., Dioscorea triphylla.
Taibembaga, MALAY, Acetate of copper.
Tai-che-shuh, CHIN., Hæmatite.
Tai Ho. See Fo Hi.
Tailor bird, Orthotomus longicauda and O. coronatus.
Tajak. See Afghanistan, 30; Central Asia; Iranian Races; Parsivan.
Taj-i-Khurus, HIND., Celosia cristata.
Taj Mahal. See Sculpture; Shah Jahan.
Tak or Takshak, Paitan, Sacæ, Indo-Scythi.
Taka-ji-ka kund. See Dhanwantari.
Takali pallam, TAM., Physalis angulata.
Taka pana, HIND., Pistia stratiotis.
Taker, SUTLEJ, Capparis spinosa.
Takhallus, ARAB., any literary title.
Takht-i-Bahi. See Cave Temples, 611.
Tak-i-Khesra. See Khusru.
Takiya, HIND., Pillow, a fakir's residence.
Takka. See Jartikka.
Takkali pandu, TEL., Physalis angulata.
Takkavi, ARAB. See Khiraj.
Ta-kung, CHIN., Levisticum.
Takuri kulay, HIND., Dolichos pilosus.
Tal, Cho, T'so, BHOT, Lakes.
Tal, Tar, HIND., Palmyra tree; Borassus flabelliformis.
Tala gass, SINGH., Corypha umbraculifera.
Talapoin, or Rahan. See Monk.
Talashrube, TAM., Aristolochia Indica.
Tal-gach'h, BENG., Borassus flabelliformis.
Tali, BENG., Corypha umbraculifera.
Tali, PANJ., Dalbergia sissoo.
Talia mankena, TEL., Urena lobata.
Talien-noc, BURM., Gynocardia odorata.
Taliera clata, Corypha clata.
Talipat, SINGH., Corypha taliera.
Tali rami, BENG., MALAY, China grass.
Talishapatri, TAM., TEL., Flacourtia cataphracta.
Talla-goya, SINGH., Iguana.
Talla-malia, SINGH., Halicore dugong.
Tallas, JAV., Colocasia esculenta.
Talmakana, Ikshura, HIND., Asteracantha longifolia.
Talpur family. See Kalhora; Laghari; Sind.
Taludala, TAM., Clerodendron phlomoides.
Talura, TAM., Vatica laccifera.
Ta-ma, Ho-ma, CHIN., Corchorus capsularis.
Tamalapaku, TEL., Piper betle.
Tamalpatra, SANSK., Cinnamomum nitidum.
Tamana, TAHITI, Calophyllum inophyllum.
Tamara, TAM., TEL., Nelumbium speciosum.
Tamara-tonga, MALEAL., Averrhoa carambola.
Tamartam maram, TAM., Averrhoa carambola.
Ta-ma-yok, BURM., Rondeletia tinctoria.
Tambatankai, TAM., Lablab cultratum.
Tambra, HIND., Garnet.
Tambraparni river, i. 566.
Tambul, ARAB., Betel leaf.
Tambut, MAHR., Hocomlia montana.
Tamidelu, TEL., Eleusine coracana.
Tamil. See Literature.
Tamina kaia, TEL., Lablab cultratum.
Tammuz. See Sun-worship.
Tam-poo-ni, MALAY, Artocarpus echinatus.
Tamr, Nukhal, ARAB., Phœnix dactylifera.
Tamravalli, TAM., Rubia cordifolia.
Tamrooj, CAN., MAHR., Elæodendron Roxburghii.
Tamuli, BENG., Curculigo orchioides.
Tanaku maram, TAM., Cochlospermum gossypium.
Tana Papua—New Guinea.
Tandai, C. of Panjab, Albizzia odoratissima.
Tandal ekoti, MALEAL., Crotalaria retusa.
Tandi maram, TAM., Terminalia bellerica.
Tanduka, SANSK., Diospyros tomentosa.
Tandula, an ordeal. See Divination; Ordeal.
Tangarisc kura, TEL., Cassia, sp.
Tangayrec, CAN., Cassia auriculata.
Tang-chan. See Eagre.
Tangedu chettu, TEL., Cassia auriculata, Inga xylocarpa.
Tanggilin, MALAY, Pangolin.
Tanghai? Tangala, MALAY, Ægle marmelos.
Tang-hwang, CHIN., Gamboge.
Tang-kwei, CHIN., Levisticum.
Tangles—Laminaria.
Tang-li, CHIN., Grewia vestita, Serpent-worship.
Tangun. Horse, 105.
Tang-yu, CHIN., Wood oil.
Tan-Gyur. See Kah-Gyur.
Tan-hiang, Tan-muh, CHIN., Sandalwood.
Tani kaia maram, TAM., Terminalia bellerica.
Tan-mohr, MAHR., Bustard.
Tannir-vittang kelangu, TAM., Asparagus adscendens.
Tan-pu-lo, CHIN., Citrus bergamia.
Tantepu chettu, TEL., Cassia tora.
Tan tie den, BURM., Rottlera tinctoria.
Ta-nyen, Tan yew, BURM., Inga bigemina.
Tan-yong. See Borneo, 419.
Taphozoinæ. See Cheiroptera.
Tapia, HIND., Crataeva nurvala, C. Roxburghii, Garlic pear.
Tapioca plant, Manihot utilissima.
Tappa of Tongataboo, cloth made from the paper mulberry tree.
Tappeta, TEL., Asystasia Coromandeliana.
Tapta Masha, an ordeal. See Divination.
Taqwim-ul-Baladan. See Abulfada.
Tara, wife of Vrihaspati.
Tara, Taliera, Tariat, BENG., Corypha taliera.

Tarakzai Khel. See Afghanistan.
Taranatha. See Paxitirtha.
Tarang-giling, MALAY, Ant-eater.
Tarantula, Lycosa Singoriensis.
Taras, HIND., Hyæna striata.
Tarbagtai. See Ili.
Tarbuzah, Tarbuz, PERS., Citrullus cucurbita.
Tarikh-i-Rashidi, by Hyder Mirza.
Tarim. See Central Asia; Rivers.
Tar ka jhar, HIND., Borassus flabelliformis.
Taro, Kopeh of S. Seas, Colocasia antiquorum.
Taroch. See Hill States.
Tarpan horse. See Horse, 109.
Tarragon, Artemisia dracunculus.
Tarsee phal, MAHR., Chrysophyllum Roxburghii.
Tarshish. See Povindah.
Tartiha, TR.-INDUS, Artemisia.
Tarung, Trung, MALAY, Brinjal, Egg plant.
Tarwa, CHUK., Hippophae salicifolia.
Tarwai, Tirwi, HIND., Ipomœa turpethum.
Tarwar, HIND., Cassia auriculata.
Tasaduq, ARAB., Sacrifice.
Tasbih, Masbaha, ARAB., Rosaries.
Tashkurgan. See Afghanistan, 31; Khulm.
Tassar. See Bombyces; Cloths.
Tasu, TEL., a Hindu hour.
Tau, TURK., Horse-tail.
Tau, HIND., Grislea tomentosa.
T'au, Ping-t'-au, CHIN., Peach.
Tau bai, BURM., Dolichos pilosus.
Tau-fu, CHIN., Pulse, Curd.
Tau-k'au, CHIN., Amomum globosum.
Taunpooni, MALAY, Artocarpus echinata.
Taura, HIND., Machilus odoratissimus, Pennisetum cenchroides.
Taus, a musical instrument.
Taüs Abu Abd-ur-Rahman. See Sufi.
Tau-sa-lat, BURM., Justicia ecbolium.
Tava karadi, TAM., Mellivora Indica.
Tavaku, TAM., Cochlospermum gossypium.
Tavatiki, TEL., Schmiedelia serrata.
Taviti-chettu, TEL., Caralluma adscendens.
Tavoy potato, Dioscorea fasciculata.
Tawaf, or circumambulation of the Kaba at Mecca; must never be performed at the tomb of Mahomed. See Tayf; Tuaf.
Tawah, HIND., a girdle, a flat round baking plate of iron.
Tawai of TR.-INDUS, Fragaria vesca.
Tawar or Tor, HIND., the elephant creeper, Bauhinia racemosa.
Tawi, HIND., Grislea tomentosa.
Tawis, ARAB., Charms.
Taw-shouk, BURM., Limonia carnosa.
Taw-the-din-bin, BURM., Ricinus dicoccus.
Taxila. See Jartikka.
Taxus. See Coniferæ.
Tay, BURM., Ebony, Diospyros ebenum.
Tayara tayzee, HIND., a Muhammadan domestic ceremony.
Tay-lak-youk, BURM., Sulphuret of antimony.
Tayl-kodokhoo, Tiaridium Indicum.
Taynga, TAM., Cocoanut palm.
Tay thee, BURM., Diospyros kaki.
Tayum, TANGALA, Indigofera tinctoria.
Tasak tsun, HIND., Rhododendron anthropogon.
Tazeea, or Taboot, the representation of the tomb of Hasan and Husain; Tazeea khana, the house of mourning, or Ashoor khana.
Th zeen ban, BURM., Bolbophyllum sunipia.
Tcherkess. See Kabarda.
Tchitrea paradisi, Paradise flycatcher.
Tchou-ma, CHIN., China grass, Rhea.
Tea. See Fahm; Hla-pet.
Tea tree of Siberia, Caragana arborescens.
Teal, *sp.* of Dendrocygna, Querquedula.
Tebu gass, SINGH., Costus speciosus.
Tecoma undulata, Bignonia undulata.
Teddee maram, TAM., Pterospermum suberifolium.
Tee. See Cave Temples, 610.
Teea-dunda, TEL., Bryonia umbellata.
Teemboorni, Teemroo, MAHR., Diospyros montana.
Teesu, HIND. ? Dhak flowers, flowers of Butea frondosa.
Tee-tee, Tay-tee, BURM., Diospyros kaki.
Tegada, TEL., Ipomœa turpethum.
Tegh Bahadur. See Nanak.
Tehr, HIND., Wild goat, Hemitragus jemlaicus, H. hylocrius.
Teila, HIND., Ribes grossularia.
Tein hyp-so, BURM., Arsenic.
Tein n'gyet, BURM., Cæsalpinia sappan.
Tej-pat, BENG., Cinnamomum nitidum.
Tekada-jutee, BENG., Monetia tetracantha.
Tekata-shij, BENG., Euphorbia antiquorum.
Tekka, MALEAL., SINGH., Tectona grandis.
Tekkali, Tilaka, TEL., Clerodendron phlomoides.
Tekki. See Turkoman; Yamut.
Telae, MALAY, Abrus precatorius.
Tela-kucha, BENG., Coccinea Indica.
Tel el Amarna. See Thya.
Teleostei. See Fishes, 1108.
Telephori, Scarlet beetles. See Insects.
Telia maina, HIND., Sturnus vulgaris.
Telinga potato, ENG., Amorphophallus campanulatus.
Telini, HIND., Mylabris Cichorii.
Telkatcha, HIND., Bryonia grandis.
Tel koduku, TAM., Tiaridium Indicum.
Tella chikur-kaia, TEL., Lablab cultratum.
Tella-giniya chettu, TEL., Alhagi maurorum.
Tella-goda, TEL., Diospyros sylvatica.
Tella-gomoodoo, TEL., Antidesma diandrum.
Tella-juvi, TEL., Ehretia buxifolia.
Tella manga, TEL., Gardenia lucida.
Tella motuku, TEL., Dalbergia Oojjainensis.
Tella neredu-chettu, TEL., Conocarpus latifolia.
Tella pachchari, TEL., Dalbergia paniculata.
Tella poonkee, TEL., Givottia rottleriformis.
Tella sopara, TEL., Albizzia elata.
Tella sugandhi pala, TEL., Hemidesmus Indicus.
Tella tumma, TEL., Acacia leucophlœa.
Telli, TAM., Anabas scandens.
Tellu kallu, TAM., Bezoar.
Telmi, SINGH., Bassia longifolia.
Telnur mudul, BENG., Curculigo orchioides.
Tel-poto, LEPCHA, Bassia butyracea.
Telsu, TEL., Acacia odoratissima.
Telugu. See Dravidian.
Tel-yelka of Yanadi, Gerbillus Indicus.
Temples. See Orissa.
Tenasserim. See Coal, 754; Hot Springs, 114.
Tenerium. See Tiryâq Farooq.
Tendu, also Tendua, HIND., Ebony, Diospyros ebenum, D. lanceolata, and D. melanoxylon.
Tendwa, HIND., Felis pardus, Panther.
Tenga, TAM., Cocos nucifera, Cocoanut.
Tenga, TEL., Cordia sebestena.
Tengalc, TAM., TEL., Right-hand castes.
Tengi Saulek. See Elymais.
Tengri Nor Lake. See Lake.
Tenimber. See Archipelago, 85.
Tenkaia, TEL., Cocos nucifera.
Ten mazhaeu, TAM., Bees-wax.
Tenna, MALEAL., Setaria Italica, Panicum Italicum.
Tennu, MALACCA, Tapirus Malayanus.
Tennus, MAHR., Dalbergia Oojjainensis.
Ten-ree or Tend-ree, Centetes illiger.
Tenthredo. See Insects.
Teora, BENG., Lathyrus sativus.
Teorah, Oil of Brassica erucastrum seed.
Teori, Dud kalmi, BENG., Ipomœa turpethum.
Tepuriya, BENG., Physalis Peruviana.
Terai tree-cat. See Viverridæ.
Teram, MALAY, Oyster.
Terek Pass, 7977 feet. See Caucasus, i. 609.
Terminalia arjuna, Pentaptera arjuna.
Termites, White ants.
Terns, *sp.* of Sternula, Thalasseus, Onychoprion, Sulochelidon, Gelochelidon, Hydrochelidon, Sœna, Sterna.
Terra Japonica, Gambier.
Terrapens. See Reptiles; Tortoise.
Tesin-apho-ta-roup, BURM., Smilax Chinensis.
Tesoo Lama. See Bhutan.
Testudinidæ. See Chelonia; Tortoise.
Tetragonotheca Abyssinica, Guizotia oleifera.
Tetraogallus. See Pheasant.
Tetrodon hispidus. See Kitama Kura.
Tettan kotte maram, TAM., Strychnos potatorum.
Tevangar, TAM. See Lemuridæ; Loris gracilis.
Tewari. See Brahmans, 431.
Tewas, HIND., Ougeinia dalbergioides.
Tesbul, HIND., Xanthoxylon hostile.
Thab, HIND., Erythrina arborescens, also Hymenodyction excelsum.
Thabambu, TAVOY, Anacardium occidentale.
Tha-b'hot-kha, BURM., Trichosanthes cucumerina.
Tha-boo-kyee, BURM., Miliusa velutina.

Tha-bwat-nha-wai, BURM., Luffa fœtida.
Tha-byæ, BURM., Acmena leptantha; Tha-byæ-pouk, Acmena Zeylanica.
Tha-byoh gah, BURM., Eugenia caryophyllifolia.
Tha-byoo, Dillenia speciosa.
Tha-dee-wa, BURM., Croton polyandrum.
Thadsal, Butale, CAN., Grewia tiliæfolia.
Thain, TAM., Terminalia bellerica, Myrobalans.
Thai-pin-yu. See Pagan.
Thai race. See Khampti.
Tha-khwa, BURM., Cucumis utilissimus.
Tha-khwa-hmwæ, BURM., Cucumis melo.
Thakola, Kathogli, BEAS, Adelia serrata.
Tha-koop-poo, BURM., Stereospermum chelonoides.
Thakur. See Kashmir.
Thakuri-kulay, BENG., Dolichos pilosus.
Tha-lai, BURM., Punica granatum.
Thall. See Kuram District.
Thal-padmo, BENG., Hibiscus mutabilis.
Thama-jam-wai-zeke, BURM., Pterospermum aceroides.
Thama-khai-ok, BURM., Abutilon Indicum.
Thambagam, TAM., Vatica tumbuggaia.
Thambatin, TAM., Canavalia gladiata.
Tha-min, BURM., Rusa dimorpha.
Than or Thani, HIND. of the Chenab district and Lahoul. Juglans regia, Walnut.
Thanari, HIND., Staphylea emodi.
Tha-nat, BURM., Cordia myxa.
Tha-nat-kha, BURM., Murraya exotica.
Tha-nat-tau, BURM., Garcinia elliptica, Gamboge tree.
Than-ba-ya, BURM., Citrus bergamia.
Thandu-kire, TAM., Amarantus oleraceus.
Thangi, also Thangoli, PANJ., Corylus colurna.
Thannab Shah, one of the Kutub Shahi dynasty in Hyderabad in the Dekhan.
Than-the-ah, BURM., Hopea floribunda.
Than-wen, BURM., Crocus sativus.
Than-ycet, BURM., Capparis pandurata.
Thanzatt, Nai, CHENAB, Hordeum hexastichon.
Thaori. See Deserts.
Thar, Tharni of Kanawar, Hemitragus jemlaicus.
Thar, NEP., Nemorrhœdus bubalina.
Tha-ra-bi, BURM., Calysaccion longifolium.
Tharla-goonj, MAHR., Adenanthera pavonina.
Tharpanam. See Hindu, 66.
Tharra, TEL., Grewia tiliæfolia.
Tharran, a small Burmese violin.
Tharri, HIND., Dioscorea deltoidea.
Tharuar, HIND., Benthamia fragifera.
Thar-ud-jamal, ARAB., Ostrich.
Thatch-grass, Saccharum spontaneum.
Thaumalea Amherstiæ. See Pheasant.
Thau-mo, Wa-mo, BURM., Polyporus.
Thau-na—Oo-tara.
Thaut-tha, BURM., Acacia elata.
Tha-wen, BURM., Pongamia glabra.
Thayet-myo, a district in the Pegu division, British Burma.
Theburskud. See Kanawar.
The-dew, BURM., Bixa orellana.
Theet khya, Zi-tha, BURM., Castanea Martabanica.
The-ho-thayet, BURM., Anacardium occidentale.
Theinghana, CAN., Cocos nucifera.
Theit-to, BURM., Sandoricum Indicum.
Thelatuth, Laterite or brickstone, used as a builder's stone, for which it is excellently fitted. Most of the handsome Roman Catholic churches at Goa are built of it.
Thelli mara, MALEAL., Canarium strictum.
Them-bau-h'soke-gyee, BURM., Cicca disticha.
Them-bau-khyen-boung, BURM., Hibiscus sabdariffa.
Them-bau-ma, BURM, Azadirachta Indica.
Them-baw-thee, BURM., Carica papaya.
Then boung, BURM., Phœnix paludosa.
Then-gan-pha-yung, BURM., Hopea odorata.
Theng-hio, CHIN., Cloves.
Theng mah, CHIN., Urtica heterophylla, Neilgherry nettle.
Theng-twa, BURM., Acetate of copper.
Theobroma. See Chocolate.
Theodotus. See Bactria, 222.
Theophila. See Insects.
Theriaca andromachi, Theriaca veneta, Tareaq Faruq.
Therrundi of Malabar, Ætobatis nari nari.
Thetis. See Adjai.
Thetti, TAM., Ixora coccinea.
Thet-ya, BURM., Gardenia floribunda.
Thet-yen-nee, Tiglium pavanna.
Thi-dew, Thi-den-pan, BURM., Bixa orellana.
Thikeree, BENG., HIND., Phaseolus radiatus.
Thilak, HIND., Wikstræmia salicifolia.
Thim-bo-Nyan, BURM., Batatas edulis.
Thin-bo zi pyu, BURM., Phyllanthus distichus.
Thirtankara. See Jain; Parasnath.
Thiru vala connay, TAM., Bauhinia tomentosa.
Thissa, HIND., Rhus buckiamela.
Thit-ka-do, BURM., Cedrela toona.
Thit-kyah, BURM., Quercus semiserrata.
Thit-kyam-bo, BURM., Cinnamomum iners.
Thit kyouk nway, BURM., Willoughbeia Martabanica.
Thit-lin-da, BURM., Spathodea, *sp.*
Thit men, BURM., Agathis loranthifolia, also Dammara orientalis and Podocarpus neriifolia.
Thit-pa-gan, BURM., Pongamia, *sp.*
Thit-phyew, BURM., Sibia glomerata.
Thit-sai, BURM., Buchanania latifolia.
Thit-see, BURM., Melanorrhœa usitata. See Resin.
Thit-tha hpu ishi, BURM., Melaleuca cajaputi.
Thit-wa-ji, BURM., Armosia dasycarpa.
Thit-ya, BURM., Gordonia floribunda.
Thi-yu, CHIN., Petroleum.
Thoda gatti, CAN., Dalbergia latifolia.
Thom, BHOT, Uraus, *sp.*
Thomas, George. See Hissar.
Thona, SUTLEJ, Taxus baccata.
Thorn apple, Datura stramonium.
Thorn tree, Cratæva cronulata.
Thorpa tribe, Tibet.
Thot'h, the divine intellect of the Egyptians. See Osiris.
Thoura, HIND. Conocarpus latifolia.
Thovary parpu, TAM., Cajanus Indicus, Pigeon pea. See Burri Tour; Dhal.
Thrushes, *sp.* of Merulidæ and Brachypodidæ.
Thuhar, HIND., Euphorbia nivulia.
Thuja articulata, Callitris quadrivalvis.
Thukallum, MALEAL., Elettaria cardamomum.
T'hul or Thal, St'hala, Arid land.
Thulkuri, BENG., Hydrocotyle Asiatica.
Thul-pudmo, BENG., Hibiscus mutabilis.
Thum, HIND., Berchemia, *sp.* In Bassahir, Thum is the Fraxinus xanthoxyloides or crab ash, and in Kanawar, Puliurus aculeata.
Thumbatan-kai, TAM., Dolichos ensiformis.
Thumbe kire, TAM., Leucas aspera.
Thumuti, TAM., Cucumis pubescens.
Thuneer, Zurnub, HIND., Taxus baccata.
Thung-hsen-pan, BURM., Gardenia florida.
Thunku-pushpa, MALEAL., Clitorea ternatea.
Thunu, JHELUM, Taxus baccata.
Thuparamaya. See Pallonarua.
T'hur, Chald. See Parkhar; T'hul.
Thu-ra-pee, BURM., Calophyllum, *sp.*
Thurlkuri, BENG., Hydrocotyle Asiatica.
Thurnel, PANJ., Benthamia fragifera.
Thur-wag of Kanawar, Felis uncia.
Thwoot-ta-bat, BURM., Achras sapota.
Thy-vala ver, MALEAL., Roots of Gynandropsis pentaphylla.
Tiaily, TAHITI, Aleurites triloba.
Ti-an, KANAWAR, Acer cultratum.
Tiau-chih, CHIN., Pæonia rubra.
Tiau-t'ang, CHIN., Uncaria gambir.
Tibba, PANJ., Sandy hillocky soil.
Tibet. See B'stan-H'ygur; Burials; Hot Springs.
Tidal wave. See Bore.
Tiddi, HIND., Grasshopper. See Insects.
Tien-chuh-kan-kyang, CHIN., Zedoary.
Tien-hwa-fen, CHIN., Bryonia.
Tien-liau, Liu, CHIN., Polygonaceæ.
Tien pau tsan, CHIN., Solanum nigrum.
Tien Shan—Central Asia; Ilavrata.
Tien-sz-lih, CHIN., Æsculus Chinensis.
Tie thie, BURM., Ficus carica.
Tietti, Tiette, JAV., Strychnos tieute.
Tifan, CHIN., Typhoon.
Tige jemudu, TEL., Sarcostemma.

Tiger lily, Pardanthus Chinensis.
Tiglath-Pileser. See Babylonia.
Ti-huieh, CHIN., Alkanet.
Tika. See Euonymus tingens.
Tikhur, Tikor, HIND., Curcuma angustifolia.
Ti-kin, CHIN., Euphorbia chamæyce.
Tikri, HIND., Boerhaavia erecta.
Tikta-raj, BENG., Amoora rohituka.
Tikto shak, BENG., Crateva Roxburghii.
Ti-kuh-pi, CHIN., Berberis lycium.
Til, HIND., Sesamum Indicum.
Tilaka. See Rudra Bhatta.
Tilaor, HIND., Houbara.
Tilea gurjun, BENG., Dipterocarpus lævis.
Tilgiri of Kashmir, Sturnus vulgaris.
Tilia kachang, PANJ., Aconitum napellus.
Tilian. See Borneo, 419.
Tilora, HIND., Sturnus vulgaris.
Tilpattar, Kilpattar, JHEL., Acer cultratum.
Timah-itam, MALAY, Lead.
Timbul, PANJ., Ficus Roxburghii.
Timburi, DEKH., Diospyros embryopteris.
Timmor, SIND., Avicennia tomentosa.
Timor. See Archipelago, 135.
Tincal, Borax.
Tind, Albinda, HIND., Citrullus fistulosus.
Tinda parua, MALEAL., Epicarpus orientalis.
Ting-hiang, CHIN., Caryophyllus aromaticus.
Ting-tsze, CHIN., Cloves.
Tinian pine, Beef-wood, Casuarina muricata.
Tin-mu, HIND., lit. three mouths; the river formed by the junction of the Chenab, Jhelum, and Ravi. At Multan it is half a mile wide.
Tinnevelly senna, Cassia elongata, C. officinalis.
Tinnim, ARAB., a sea serpent.
Tin-stone, Cassiterite.
Tipili, TAM., SINGH., Chavica Roxburghii.
Tipula, *sp.*, the crane-fly; the larvæ attacks poppy seed in store.
Tir, Sera, SIND., Capra ægagrus.
Tirah valley. See Chura.
Tiroanamalay maram, TAM., Berrya ammonilla.
Ti-rh, Muh-rh, CHIN., Fungus, Mushroom.
Tirmantha, TAM., Earnest money.
Tirni, Calligonum polygonoides.
Tiroonoot condi, TAM., Ashes.
Tirpu, Plains of S. CAN., Hopea parviflora.
Tirthankara. See Jain; Palitana.
Tirukalli, TAM., Euphorbia tiraculli.
Tirukkaa Hukkunram. See Paxitirtha.
Tiru-nitri-pach'ha, MALEAL., Artemisia.
Tiruvallavar. See Kural.
Tirwa, CAN., Xylia dolabriformis.
Ti-shwang, CHIN., Saltpetre.
Tiska, CAN., Gazella Bennettii.
Tista. See Rivers.
Tita, BHOT, Gentiana tenella.
Tita, BENG., Picrorrhiza kurrooa.
Titans. See Rori Barolli.
Tita-pat, BENG., Corchorus acutangulus.
Titar, Tatri, JHELUM, Rhus succedanea.
Tithi. See Panchanga.
Titles. See Chalukya; Hindu, 74; Hwang.
Tit-sein, Ban-kha, BURM., Terminalia bellerica.
Titta commodoo, SINGH., Colocynth.
Ti'u of Hazara, Artocarpus integrifolius.
Tiwur, BOMBAY, Barringtonia acutangula.
Tiyari. See Chaldee.
Tkong-hia, CHIN., Caryophyllus aromaticus.
Toa-kha-kyi, BURM., Chiretta.
Toaratti maram, TAM., Capparis divaricata.
Tobba. See El-Beit; Himyar.
Tochari. See Ili; Sacæ.
Toda. See Dravidian.
Toda pendek, MALAY. See Fishes, 1116.
Toda vadi, MALEAL., Oxalidaceæ.
Toddali, TAM., Toddalia aculeata.
Todda pana, MALEAL., Cycas circinalis.
Toddy. See Cocoanut.
Toddy cat, Paradoxurus musanga.
Toddy shrike, Artamus fuscus.
Tœmbili, SINGH., Cocos nucifera.
To-gei, MALEAL., Peacock.
Toggul bawali, CAN., Pteropus Edwardsii.
Togral Beg. See Attila.
Toguru, TEL., Morinda citrifolia.
Tohar, Tour, HIND., Cajanus Indica, Dhal.
Tokai, MALAY, Gecko.
Toka pana, HIND., Pistia stratiotis.
Tokdar, HIND., Eupodotis Edwardsii.
Toko-pát palm. See Jhapi.
Tokra, HIND., Basket.
Tola, a Hindu college, i. 435.
Tola, HIND., Ordeal.
Tola, CAN., Canis pallipes, Wolf.
Tolsu-mudriya, BENG., Loea.
Tom, Tarum, Talum, MAL., Indigofera tinctoria.
Tomato—Lycopersicum.
Tombiravan, TAM., Jugglers.
Tombs. See Architecture, 149.
Tomorus of Arrian. See Oritæ.
Tomicus. See Insects.
Tommon munga, MALAY, Curcuma amada.
Tomon, MALAY, Curcuma zedoaria.
Tomra kaddu, HIND., Lagenaria vulgaris.
Tonareng. See Semitic Races.
Tonberos of Pliny. See Oritæ.
Tondano. See Celebes.
Tondi, Tadi chettu, TEL., Terminalia bellerica.
Tondi terogam, MALEAL., Callicarpa.
Tonga-bhera. See Oritæ.
Tong-pang-chong, CHIN., Rhinacanthus communis.
Tongus, HIND., Marsdenia tenacissima.
Tonk. See Hindustan, 80.
Toon, Cedrela serrata.
Tooth-brush tree, Salvadora Persica.
Topaz, Precious stones.
Topes. See Buddhist Remains; Inguletz.
Tor Tarin. See Afghanistan.
Tora-bujja, SUTLEJ, Adhatoda vasica.
Toralu, CAN., Canis pallipes, Wolf.
Tora malu, SINGH., Cybium guttatum, the seir fish.
Toreh tree, Ixora parviflora.
Tordino berlaccio, VENICE, Ortolan.
Torelaga, TEL., Limonia acidissima.
Tori, Torii, JAP. See Toran.
Toro. See Ordeal.
Torpedinidæ. See Fishes, 1117.
Tortoises. See Chelonia; Reptiles.
Tortricidæ. See Reptiles.
To-sa of Nepal, Hordeum hexasticchon.
Tota calir akkisa, TEL., Colocasia Indica.
Tota kura, TEL., Amarantus oleraceus.
Totanus, Greenshank. See Scolopacidæ.
Tot-chi-fa, CHIN., Quisqualis Indica.
Totilla-gass, SINGH., Calosanthes Indica.
Totri, PANJ., Rhus coriaria.
Touaf, ARAB., Circumambulation.
Touanesó, a kind of Chinese silk fabric.
Toucans, *sp.* of the family Ramphastidæ.
Touk-kyau, BURM., Pentaptera arjuna.
Touk-ta, BURM., Tacca pinnatifida.
Toung peing-nai, BURM., Artocarpus echinatus.
Toung-phet woon, BURM., Pterospermum acerifolium.
Toung-tha. See Chittagong.
Toung-than, BURM., Xanthoxylon budrunga.
Tour, HIND., Xanthium strumarium.
Tovaray, TAM., Diospyros toposia.
Tow. See Codilla.
Tower of Silence. See Dokhma.
To-wi-kie, CHIN. See Colours, 786; Porcelain.
Towru, Toudu, TAM., TEL., Bran.
Toxotes jaculata. See Fishes, 1117.
Toy Cart—Joncsia asoka.
Tragelaphus hippelaphus, Portax pictus.
Tragopon. See Pheasant.
Tragularia horrida, Pisonia villosa.
Tragulus. See Cervidæ.
Tranna, HIND., Vincetoxicum canescens.
Transmigration. See Sankhya.
Transoxiana—Mawar-u-Nahr.
Trao, Rjao, LADAKH, Buckwheat.
Trap. See Building Materials.
Trap-door spider. See Insects.
Trap-tuffa. See Building Materials.
Trasi, JAPAN, Balachan.
Trasta-walu, SINGH., Ipomœa turpethum.
Trawake of Sutlej. See Oxalidaceæ.
Tree cat, *sp.* of Paradoxurus.
Tree-ferns. See Alsophila.
Tree of healing, 586.
Tree of life. See Carpets, 586.
Tree swift, Dendrochelidon, *sp.*
Tree-worship, Serpent-worship.
Trees, sacred, Hindu, 65.
Trekam, Trekhan, JHEL., Acer cultratum.
Trepang, MALAY, JAPAN, Holothuria.
Treronidæ. See Birds; Columba.
Tributary Mahals. See Bendkar; Cuttack.
Trichelia emetica. See El-Kaja.
Trichia exigua. See Drepana; Insects.
Trichinidæ. See Sillago.
Trichobusis. See Hurdah.
Trichoglossus ornatus. See Citura.
Trichoon karka, Arundo karka.
Trichopodus. See Fishes, 1116.

Trichosporum grandiflorum, Æschynanthus grandiflorus.
Tridacna. See Clam; Mollusc.
Trigla. See Gurnard.
Trigonella Indica, Rothia trifoliata.
Trigonella tetrapetala, Cyamopsis psoraloides.
Trigonocephalus Sumatranus, Reptiles.
Trikudnah, MURREE, Acer cultratum.
Trilocha varians, a silk-worm of India. See Bombycina, 412.
Trimeresurcs. See Reptiles.
Trimurti. See Basant.
Trincomalee wood, Berrya ammonilla.
Tringa, Stints, Knot, Scolopacidæ.
Trionyeidæ. See Reptiles.
Tripoli; in Barbary is Tarablus-ul-Gharb, a seaport town with a harbour, and Tarablus-us-Sham, Syrian Tripoli, a seaport town with an open roadstead. Tripoli means three towns.
Tripunkhi, HIND., Coldenia procumbens.
Tri-sira, a name of Cerbura.
Trisula or Trident. See Siva.
Triumphal arch. See Pai-loo; Toran.
Trivikrama Bhatta. See Sri Harsha.
Trivikrama Sena. See Baital Pachisi.
Trogon, *sp.* of Harpactes.
Trophis aspera, Epicarpus orientalis.
Tropic bird, *sp.* of Phæton.
Tropidonotus junceus. See Reptiles.
Trout of the rivers of India, *sp.* of Barilius.
Trubu, MALAY, Fish roe, Alausa toli.
Truffles. See Fungus.
Trumba, Kala, KASHMIR, Buckwheat.
Trummel, Tirmul, PANJ., Ficus Roxburghii.
Tsa-ba-len? BURM., Andropogon schoenanthus.
Tsabri, SUTLEJ, Buckwheat.
Tsah-tsiang-ts'au, CHIN. See Oxalidaceæ.
Tsale, TIB., Borax.
Tsalla-gadda, TEL., Asparagus adscendens.
Tsal Tsalya. See Fly; Insects.
Tsal-wee, BURM., a chain worn as a badge of nobility by the Burmese. It has been surmised to have its origin in the Brahmanical thread.
Tsam-be-ley, BURM., Lagerstræmia parvitlora.
Tsa-muot, BURM., Anethum graveolens.
Tsa myeik, BURM., Anethum sowa.
Tsang, also Si Tsang, the Chinese name of Tibet.
Tsang-shuh, CHIN., Atractylodes rubra.
T'san-pu, or Brahmaputra.
Tsan-tau, Hu-tau, CHIN., Faba vulgaris.
Tsa-tha-khwa, BURM., Coccinea Indica.
Tsau, Ta-tsau, CHIN., Jujube tree.
Ts'au kiuch-ming, CHIN., Celosia argentea.
Tsau-koh, CHIN., Gleditschia Sinensis.
Ts'au-kwo, CHIN., Amomum medium.
T'sau-mu, CHIN. See Oxalidaceæ.
Tsau-tau-k'au, CHIN., Amomum globosum.
Tsay-thum-by-ah, BURM., Gardenia lucida.
Tsch-sie, CHIN., Alisma plantago.
Ts'ch-tsih, CHIN., Euphorbia lunulata.
Tscin-a-pho-ta-roup, BURM., Pachyma cocos.
Tse-ki, CHIN., Porcelain.
Tser-khar, Soorch, PANJ., Hippophae salicifolia.
Tser-kuji, Chu-li, CHIN., Prunus Armeniaca.
Tse tse. See Fly; Insects; Tabanidæ.
T'sia-pangam, MALEAL, Cæsalpinia sappan.
T'siela, MALEAL., Ficus t'siela.
Tsien, Tsang, or Anterior Tibet, Tibet.
T'sing-hau, CHIN., Artemisia, *sp.*
Tsing-kiuh-pi, CHIN., Citrus microcarpa.
T'sing-kwo, CHIN., Canarium pimela.
Tsing-siang, CHIN., Celosia argentea.
Tsing-sian-tau, CHIN., Pea.
Tsing-tu. See Sukhavati.
Tsin-kiau, CHIN., Gendarussa vulgaris.
Tsioh-rh-ngo-tan, CHIN., Euphorbia chamæsyce.
Tsiru panna, MALEAL., Calophyllum calaba.
Tso, TIBETAN, a lake. See Lake.
Tsoing, BURM., Gavæus sondaicus.
Tso-na-ts'au, CHIN. See Solanaceæ.
Tso-tsiang-ts'au, CHIN. See Oxalidaceæ.
Tsze-fen-shwang, CHIN., Vermilion.
Tsze-hwa-ti-ting, CHIN., Fumaria officinalis.
Tsze-kin-hwa, CHINA, Viola odorata.
Tsze-ts'au-jung, CHIN., Lac.
Tsz-tan, CHIN., Anchusa tinctoria.
Tuba—Kalpa-vriksha.
Tuba bidji, MALAY, Anamirta cocculus.
Tubiki, Tinduki, TEL., Diospyros embryopteris.
Tubipora musica, Zoophyte.
Tubunna, Chakan, BENG., Celtis orientalis.
Tuckir, Tuggur, HIND., Asarum Europæum.
Tuda valle, TAM., Solanum trilobatum.
Tufan, ARAB., TURK., Deluge.
Tuffa armina, ARAB., Armeniaca vulgaris.
Tuffah, ARAB., Pyrus malus.
Tuffah-ul-arz, ARAB., Anthemis nobilis.
Tu-fu-ling, CHIN., Smilax Chinensis.
Tuga. See Brahmans, 431.
Tugha, TURK., Horse-tail standard.
Tugu-hson-pan, BURM., Gardenia florida.
Tuhfah-us-shaitan, ARAB., Mandrake.
Tu-hiung, CHIN., Realgar.
Tuh-kiah, SANSKRITO-CH., Chestnuts.
Tuh-kioh-lien, CHIN., Caladium xanthorizum.
Tu-hwui-hiang, CHIN., Aniseed.
Tuisto. See Suevi.
Tui-tui of Australia, Aleurites triloba.
Tuj, Dalchini, HIND., Cinnamon.
Tukeyium, HEB., Peacock.
Tukharistan. See Talikan.
Tukhm-i-bunj-i-Rumi, PERS., Hyosciamus niger.
Tuki, TEL., Diospyros ebenum.
Tukla, Kapila, HIND., Rottlera tinctoria.
Tula Ayana. See Ayana.
Tulip tree, Thespesia populnea.
Tulka-pyr, TAM., Phaseolus.
Tulsi, Ocimum, an ordeal. See Divination.
Tulsi Sashti. See Kanhori.
Tulu. See Languages.
Tum, BENG., Garuga pinnata.
Tumal, HIND., Diospyros tomentosa.
Tumbi maram, TAM., Diospyros ebenum.
Tumbuggaia, TEL., Vatica tumbuggaia.
Tumi, Tumbi, TAM., TEL., Diospyros Wightiana.
Tumika, Tumiki, TEL., Diospyros embryopteris.
Tumma chettu, TEL., Diospyros melanoxylon.
Tummi, TEL., Leucas cephalotes.
Tum-pha, TIB., Taxidea leucura.
Tumtum, ARAB., Rhus coriaria.
Tumulus. See Cromlech; Ingouletz; St'hupa.
Tung, BENG., Rottlera tinctoria.
Tung, KASH., Taxus baccata.
Tung, Titar, Titri, PANJ., Rhus semialata.
Tunga muste, TEL., Cyperus hexastachyus.
Tung-k'au, CHIN., Brick-tea.
Tung-kwa, CHIN., Benincasa cerifera.
Tung-lo, CHIN., Sulphate of copper.
Tung-po-tau, To kuh, CHIN., Amomum cardamomum.
Tung-sha, CHIN., Sal ammoniac.
Tung-shu, CHIN., Jatropha curcas.
T'ung-toh-muh, CHIN., Aralia papyrifera.
Tung-t'sau, CHIN., Clematis vitalba.
Tung-ts'ing, CHIN., Ligustrum lucidum.
Tunguz. See Oronchon.
Tunicaries. See Ascidiadæ.
Tunkana, SANSK., Borax.
Tun-kwa, Hiang-kwa, CHIN., Cucumis melo.
Tunna, Toon, BENG., Cedrela toona.
Tunnus, MAHR., Ougeinia dalbergioides.
Tupha, TURK., Horse-tail standard.
Tu-pih-poh, CHIN., Betel leaf.
Tur, Dhal, HIND., Cajanus Indicus.
Turai, Chaul-turai, HIND., Luffa fœtida.
Turaju, head hunters of Celebes.
Tura lodh, HIND., Rondeletia tinctoria.
Turanian languages—Literature.
Turanj, HIND., Citron.
Turbat-i-Haidari. See Khaf.
Turbuz, HIND., Citrullus cucurbita.
Turch-tezak, PERS., Cress.
Turfa, ARAB., Tamarix gallica.
Turi, MALAY, Agati grandiflora.
Turia, HIND., Brassica juncea.
Turk. See Afghanistan; Central Asia; Ertoghrul; Kara Kalpak; Turkoman.
Turka-vejia, TEL., Olax scandens.
Turkilani. See Afghanistan.
Turkish. See Languages.
Tur-mandi, HIND., a cattle stand.
Turmeric, Curcuma longa.
Turmeric tree, Coscinium fenestratum.
Turnsol, Tiaridium Indicum.
Turpani, HIND., Viscum album.
Turpentine trees, Tristania albicans of Australia.
Turquoise. See Firozah; Precious Stones.
Turrœa virens, Atalantia monophylla.
Turrien, SIAM., Durio zibethinus.

Turaba, Hamaz, Pers., Rumex acetosa.
Turahka. See Takshak.
Turtles. See Chelonia; Reptiles.
Turui, Beng., Luffa, *sp.*, Watermelon.
Turumti, Hypotriorchis chicquera.
Turunj, Arab., Citron.
Turunjabin, Hind., Manna of Alhagi maurorum.
Tusa. See Cloths.
Tusi wool. See Ibex.
T'u-sz-tsze, Chin., Cuscuta reflexa.
Tut, Dukh., Hind., Morus Indica.
Tutanagam, Tam., Zinc.
Tutanague work. See Arts, 172.
Tu-tang, Koh-liu, Chin., Calamus.
Tutatar, Hind., Woodcock.
Tu-thi, Tam., Abutilon tomentosum.
Tutiya, Nila tutia, Hind., Sulphate of copper.
Tutthanjana, Sansk., Bluestone.
Tutti benda, Tel., Abutilon Indicum.
Tuttura-bonda, Tam., Abutilon Indicum.
Tuturalu of Kamaon, Martes flavigula.
Tuvarny, Can., Cajanus Indicus.
Tuwari. See Deserts, 920.
Twice born. See Dwaija.
Typhlopodo—Ponerida.
Tze-tau, Chin., Rosewood.

U

Ua-jo, Ua, Khas, of Sutlej, Hordeum cœleste.
Ubbukada, Tel., Rothia trifoliata.
Ubdie narikaylum, Sansk, Seacocoanut.
Ubhul, Hind., Juniperus recurva.
Ubi, Jav., Malay, Dioscorea alata.
Ubusha of Sutlej, Artemisia, *sp.*
Uchinta kura, Tel., Solanum trilobatum.
Ud, Mahr., Paradoxurus musanga.
Ud, Arab., Hind., Agallocha wood.
Udai. See Binua; Kedah.
Udaipur, Hindustan, 80; Mewar.
Udaya Das. See Birbhan.
Udayagiri. See Cave Temples; Khandagiri.
Ud-billi, Hind., Lutra nair.
Udiram panum, Sansk., Cacalia coccinea.
Udora verticillata, Hydrilla verticillata.
Udotea. See Sea-weeds.
Uduga, Udugu, Tel., Alangium decapetalum.
Udumu, Tam., Iguana.
Ugai, Shing, Tr.-Ind., Fraxinus floribunda.
Ugal, Ulgo phapar, Sut., Buckwheat.
Ugaru, Beng., Excoecaria agallocha.
Ugir-turki, Pers., Acorus calamus.
Uigur. See Dungani; Turk; Turkestan.
Ukkilbar ke munke, Dukh., Canna Indica.
Ulandu, Tam. See Phaseolus.
Ulat-chandal, Beng., Gloriosa superba.
Ule. See Caoutchouc.
Ulimera, Tel., Diospyros chloroxylon.
Ulimidi, Tel., Crataeva Roxburghii.
Ulisi, Valisi, Valasalu, Tel., Guizotia oleifera.
Ullador. See Mala-Arayan.
Ullena tige, Tel., Cardiospermum halicacabum.
Ullinda, Tel., Diospyros chloroxylon.
Uluwa, Singh., Trigonella fœnum græcum.
Ulva latissima, Sea-weeds.
Ulvallu, Ulava, Tel., Dolichos uniflorus.
Umar-ibn-ur-Ridh. See Sufi.
Umati, Tel., Datura.
Umbrella. See Cave Temples, 610; H'tee; Tee.
Umbrina Russelli. See Isinglass.
Umbuti ki baji, Dukh. See Oxalidaceæ.
Umi-do-ganie, Chin., Limulus longispina.
Um-Keis. Hot Springs, 111.
Umkund babri, Tr.-Ind., Ajuga bracteata.
Ummeydes. See Abdallah.
Umriti, Amalaca, Sansk., Emblica officinalis.
Unab, Arab., Fruit of jujube tree.
Unab-deo. See Hot Springs, 113.
Unai. See Het Springs, 112.
Undi, Sultana champa, Hind., Calophyllum inophyllum.
Undimandari, Tel., Polianthes tuberosa.
Undopherres. See Bactria, 224.
Undurugu manu, Tel., Sapindus rubiginosus.
Unkudu, Tel., Uncaria gambir.
Un-küe, Chin., Limulus longispina.
Unona esculenta, Artabotrys odoratissimus.
Unona longifolia, Polyalthia longifolia.
Unona narium, Uvaria narum.
Unsri of Sutlej, Rubus, *sp.*
Untamol, Hind., Tylophora asthmatica.
Unta ruma, Malay, Camel's hair.
Untia bag, Hind., Felis leo.
Unt-katara, Hind., Solanum xanthocarpum.
Ununtamul, Beng., Hind., Hemidesmus Indicus.
Uorhuree. See Kurno; Marriage.
Upad'hay'ya. See Hindu, 66.
Upa Meru. See Pamir.
Upana, Sansk., Asarum Europæum.
Upanayam. See Hindu, 66.
Upanga, Beng., Achyranthes aspera.
Uparinta, Tel., Cardiospermum halicacabum.
Upas tjeute, Tshellik, Jav., Strychnos tieute.
Upas tree, Antiaris toxicaria.
U-pa-tzin, Burm., a recluse.
Uplati, Hind., Aplotaxis auriculata.
Upo'daki, Sansk., Basella cordifolia.
Uppu ponna, Tel., Rhizophora mucronata.
Uparajita, Beng., Clitoria ternatea.
Upwa, Yupo, Ladakh., Avena fatua.
Ur of the Chaldees, Imam Ali. See Babylonia, 218; Chaldæa, 641.
Ural Lake. See Lake.
Urali, Mala-Arayan.
Uraon. See Dravidian.
Uravada, Varavada, Tel., Bruguiera parviflora.
Urcola elastica. See Caoutchouc.
Urdu. See Literature.
Uredo. See Caries; Fungus.
Urela-tamara, Mal., Tam., Ionidium suffruticosum.
Uren, Malear., Urena lobata.
Urghi, Hind., a bunch of doorva grass tied with a slip of plantain leaf or with red cotton.
Urginea Coromandelica. See Kaza Gadda.
Urginea maritima, Squill.
Urit-manis, Malay, Glycyrrhiza.
Uriya. See Orissa.
Urkan, Arab., Lawsonia inermis.
Uro kanija nalika, Tel., Celtis orientalis.
Uropeltidæ. See Reptiles.
Urrvi, Urni, Geh, Panj., Corylus colurna.
Ursa. See Panchami Rishi.
Ursool, Mahr., Canthium didymum.
Urtenysa, Arab., Cyclamen, *sp.*
Urtica heterophylla, Girardinia Leschenaultiana.
Urtica interrupta, Boehmeria interrupta.
Urtica nivea, China grass, Boehmeria nivea.
Uru, Urni of Kaghan, Cæsalpinia sepiaria.
Uru joba, Juva, Beng., Hibiscus rosa Sinensis.
Urukann, Singh., Lasianthera apicaulis.
Urupa, Malear., Hopea decandra.
Urus, Beng., Solanum verbascifolium.
Urus or Utarosha, Sansk., Adhatoda vasica.
Urvi. See Prit'hiva.
Ushak? Arab., Gum-ammoniac.
Ushb, Arab., Green grass; when dry it is called Hashish.
Ushnaz daoud, Arab., Phaseolus.
Ushtarana Afghans. See Povindah.
Usik manu, Tel., Crataeva Roxburghii.
Usima. See Kusima.
Usirika, Tel., Phyllanthus emblica.
Usman. See Ertoghrul.
Ussul-ur-rasun, Arab., Elecampane root.
Ustakhudus, Arab., Lavender.
Utareni, Tel., Achyranthes aspera.
Utharayanan, Sansk., the northern solstice. See Avani Avattam; Hindu, 66.
Utimookta, Dukh., Hiptage madablota.
Utman Khel. See Afghanistan.
Utmanzai. See Afghanistan.
U-tsang—Tibet.
Uvaria cerasoides, Guatteria, *sp.*; Polyalthia cerasoides.
Uvaria lutea, Alphonsea lutea.
Uvaria uncata, Artabotrys odoratissimus.
Uyana, Sansk., from Aya, to move.
Uyodhya, properly Ayudhya, the province of Oudh, from 'a' and Yoodh, war.
Uzbak. See Bokhara, 405; Central Asia; Kalmuk; Turk; Turkestan.

V

Vada ganneru, Tel., Plumiera acuminata.
Vadaja, Tel., Acorus calamus.
Vada kodi, Malear., Gendarussa vulgaris.
Vadanike, Tel., Vangueria spinosa.
Vadatala, Tam., Dichrostachys cinerea.
Vaday valli maram, Tam., Vachellia farnesiana.
Vadlaya rala, Tel., Hiptage madablota.
Vaghe, Tam., Albizzia lebbek.
Vahan, the vehicle of Hindu deities.
Aku para, the tortoise which sustains the earth. See Hindus, 63.
Antelope of Vayu or Pavana and Chandra.
Arva, half horse, half bird, one of the horses of the moon.
Buffalo of Yama.

Dog and horse of Siva, as Bhairava, the horse also of Kuvera.
Elephant, Airavati of Indra, also of the eight points of the compass.
Garuda, half man, half eagle, of Vishnu.
Hansa, swan or goose of Saraswati and Brahma.
Makar or Jalampa, a sea monster, of Varuna, sometimes of Kama Deva.
Nandi, the bull of Siva and Parvati.
Parrot of Kama Deva.
Ram or he-goat of Agni.
Sesha Naga, or Ananta, the serpent of Vishnu.
Tarkshya.
Tiger and lion of Parvati, as Kali and Durga.
Vulture of Sani or Jupiter.
Vahea. See Caoutchouc.
Vaidik. See Brahman, 430; Hindu, 70.
Vairagi. See Byragi; Sanyasi.
Vaivaswata, Sun-born.
Vajra valli, SANSK., Cissus quadrangularis.
Vakka, Vakudu, Carissa carandas.
Valabhacharya. See Bindrabaa; Rudra Sampradayi.
Valaiti agati, DUKH., Cassia alata.
Valaiti-mung, DUKH., Arachis hypogea.
Valaiti sunn of Muttra, the Ambari.
Valambiri kaya, TEL., Isora corylifolia.
Valati-polam, TAM., Balsamodendron myrrha.
Vale-palam, TAM., Plantains.
Vallai murda, TAM., Terminalia Berryi.
Vallai sharunne, TAM., Trianthema decandrum.
Vallai tutam, TAM., Sulphate of zinc.
Valla rugu, TAM., Cicendia hyssopifolia.
Valle kire, TAM., Gynandropsis pentaphylla.
Valli modigam, MAL., Ancistrocladus Heyneanus.
Vallisneria verticillata, Hydrilla verticillata.
Valli toregam, MALEAL., Ficus rubescens.
Valuluvy, TAM., Celastrus paniculatus.
Valumpiri, MALEAL., Isora corylifolia.
Vama Deva, a Vedic Risli, author of many hymns.
Vamanar, Dwarf avatar. See Avatar.
Vamigram and Vaminagari, Bamian city.
Vamilapura. See Balabhi.
Vaminta, TEL., Gynandropsis pentaphylla.
Vampyridæ, Vampire bats, *sp.* of Megaderma.
Van. See Lakes.
Vana, HIND., Silk thread for weaving.
Vana-go, BENG., Gavæus gaurus.
Vana-prastha. See Hylobii; Sanyasi.
Vangala patchi, TAM., Acetate of copper.
Vanni, Parambay, TAM., Prosopis spicigera.
Van parati, Parati, TAM., Gossypium herbaceum.
Vanta sena, the heroine in the drama Mrich-chha-kati or Toy Cart.
Vara, SANSK. See Hora; Panchanga.
Varaga, Varagalu, TEL., Panicum, *sp.*
Varaha, Boar avatar. See Avatar.
Varanidæ. See Reptiles.
Varanus. See Iguana.
Varanus Piquotii, Empagusia flavescens.
Varna, SANSK., Colour. See Caste.
Varnish tree, Stagmaria verniciflua.
Varra kasimi, TEL., Toddalia aculeata.
Vartaka, SANSK., Solanum melongena, Egg-plant, Brinjal.
Varugu, Warugoo, TAM., Panicum.
Vasa-nabhi, TEL., Aconitum napellus.
Vasana gaddi, TEL., Andropogon schoenanthus.
Vasant'ha. See Basant'h; Kama.
Vashishtadwaitya. See Dwaitya.
Vasi. See Jain.
Vassambu, TAM.; Acorus calamus.
Vatica robusta. Hindu worship, 65.
Vatsan, Sunni of PANJ., Hibiscus cannabinus.
Vatsa priam, SANSK., Commelyna communis.
Vattanghy, TAM., Cæsalpinia sappan.
Vatti-veru, TEL., Andropogon muricatus.
Vayu velangam, TEL., Embelia ribes.
Vayvagarra lunu, SINGH., Sal-ammoniac.
Veckalie, TAM., Anogeissus latifolius.
Vedala chettu, TEL., Gærtnera racemosa.
Vedanga. See Joshi; Panchanga.
Vedanta. See Darsana; Sankhya.
Vedditale, TAM., Dichrostachys cinerea.
Veduru uppu, TEL., Tabashir.
Vegetable marrow, Cucurbita ovifera.
Veiled prophet, Hashim-bin-Hakim.
Vekkudu tige, TEL., Cardiospermum halicacabum.
Velaga, Kapitthamu, TEL., Feronia elephantum.
Velago xylocarpa, Pterospermum suberifolium.
Vel-ambar, HIND., Pentatropis spiralis.
Vela villa, TAM., Feronia elephantum.
Vel-ghas, HIND., Cuscuta reflexa.
Vellai naga maram, TAM., Conocarpus latifolia.
Vellai toaratti maram, TAM., Capparis grandis.
Vella munthi, MAL., Macaqus radiatus.
Vella mutti, TAM., Terminalia arjuna.
Vellanga, TAM., Feronia elephantum.
Vella nuchi, TAM., Vitex negundo.
Vellarsia Indica, Menyanthes Indica.
Vellorikai, TAM., Cucumis sativus.
Veltu, TEL., Rottlera laccifera.
Veluturu, Yel-tur, TEL., Dichrostachys cinerea.
Vel velam, Vellai tumma, TAM., Acacia leucophlæa.
Vema donda, TEL., Echinops echinatus.
Vembu, MALEAL., Acorus calamus.
Vempali, TEL., Tephrosia purpurea.
Venda, MALEAL., Abelmoschus esculentus.
Vendidad. See Hapta Hindu; Pursee; Pa-zend; Zend Avesta.
Vendium, TAM., Trigonella fœnum græcum.
Venetians. See Commerce, 790.
Vengay, TAM., Pterocarpus marsupium.
Venna-devi kura, TEL., Commelyna communis.
Venna katte-tige, TEL., Asystasia Coromandeliana.
Ventek, Veveyla, TAM., Lagerstræmia microcarpa.
Ventilago. See Dyes.
Venuturu, TEL., Caillea cinerea.
Vepam maram, TAM., Azadirachta Indica.
Veppalci, TAM., Conessi bark.
Verbena cuneata, Zapania nodiflora.
Verbena triphylla, Aloysia citriodora.
Verbesina sativa, Guizotia oleifera.
Verduru gadda, TEL., Eulophia virens.
Ver kadale, TAM., Ground-nut.
Veronica Lindleyana, Picrorrhiza kurrooa.
Verri ulva, TEL., Dolichos falcatus.
Veru sanaga, TEL., Arachis hypogea.
Vesha, SANSK., an ordeal.
Vesha-moongi, TAM., Vesha moongaloo, TEL., Crinum Asiaticum and C. defixum.
Vesha-mushti bijum, SANSK., Strychnos nux vomica.
Vetala-Panchavisati, the Baital Pachisi.
Vetch, Vicia sativa; Chickling vetch, Lathyrus sativus.
Vetra, SANSK., Calamus.
Vettilei, TAM., Chavica betle.
Vetti vayru, TAM., Cuscus root.
Vettiyan, TAM., a village servant who performs the lowest offices.
Veyala, TEL., Vitex negundo.
Vichitra-virya. See Pandu.
Videha, the modern Tirhut.
Vidi maram, TAM., Cordia myxa.
Vigrahum, Salai, TAM., Idols.
Vihara. See Architecture, 143; Buddhist Remains; Cave Temples.
Vijianagar, Bijayanagar, Hampi.
Vikramaditya, Sinhasana, Dwatrinsatika, Kurur.
Village deities. See Hindus, 63.
Villarsia Indica. See Chiretta.
Vilva-maram, TAM., Ægle marmelos.
Vimana. See Architecture, 143.
Vindhya Mts., i. 44; Hindustan, 77.
Viola suffruticosa, Ionidium suffruticosum.
Viperidæ. See Reptiles.
Viragu, TAM., Harmala ruta?
Virakta, Vairagi. See Saiva.
Viramu, Vigram, TEL., Idols.
Vir kadale, TAM., Arachis hypogea.
Viru shanagalu, TEL., Ground-nut.
Visagul, SINGH., Bezoar.
Vish, Bish, Bikh, HIND., Aconitum ferox.
Visha. See Divination; Ordeal.
Visha boli, TEL., Sida acuta.
Visha kallu, TAM., Bezoar.
Vishal, Vellal, TAM., Embelia ribes.
Vishamandala, SANSK., Crinum Asiaticum.
Vishnu kranta, TEL., Evolvulus alsinoides.
Vishnu-Sarman. See Panchatantra.
Vishwa-tulasi, SANSK., Basella alba.
Visishta-Dwaita. See Charvaka.
Vispard. See Parsee.
Vistara'kula pala, TEL., Holostemma Rheedianum.
Visva Karma. See Caste.
Viswanatha. See Raghava.
Vitasta, the Hydaspes.
Vitis quadrangularis, Cissus quadrangularis.

Vitti-ver or Vetti-ver, TAM., Cuscus root.
Vittulei-kasturi, TAM., Abelmoschus moschatus.
Vittulu, TEL., Seeds.
Vitty maram, TAM., Dalbergia sissoides.
Vivada Ratnakar, a law-book by Chandeswara, about A.D. 1314.
Vivaswat, SANSK., the brilliant, a name of Surya, the sun.
Vobilinta, TEL., Polygonum herniaroides.
Vodata, TEL., Sciurus palmarum.
Vodisa, TEL., Cluytia collina.
Vole, Arvicolinæ, *sp.*, Arvicola Necdon.
Volkameria multiflora, Clerodendron phlomoides.
Vologeses. See Hoormuz.
Vood'harni. See Hindu, 70.
Vowal moen, TAM., Pomphret.
Vrash, HIND., Rhus buckiamela.
Vrihat Kat'hasagara. See Baital Pachisi; Literature.
Vrinda Vana. See Brindaban.
Vrishabdeva. See Brishabdeva.
Vrishotsarg. See Brikhotsarg.
Vuckan maram, TAM., Diospyros cordifolia.
Vuckoo-nar, TAM., Sunn.
Vula, TEL., Cadaba Indica.
Vuladambu, TAM., Calonyction grandiflorum.
Vular, KANGRA, Verbascum thapsus.
Vullari kire, TAM., Hydrocotyle Asiatica.
Vum-maai, TAM., Chloroxylon Swictonia.
Vuna, HIND., Viburnum fœtens.
Vurtuli, HIND., Dichrostachys cinerea.
Vutti-khillo-killupi, TAM., Crotalaria verrucosa.
Vuttom, TAM. See Iron; Olli.
Vuttunghy, TAM., Sapan-wood.

W

WAA-KAILU, TEL., Carissa diffusa.
Wadda-kaha, SINGH., Acorus calamus.
Wadi buti, SUTLEJ, RAVI, Ajuga bracteosa.
Wagher of Dwaraka. See Saurashtra.
Waghorn, Lieut. Overland Route.
Waghutty, MALAY, Capparis grandis.
Wagna khyat, BURM., Bambusa.
Wagtails, *sp.* of the sub-fam. Motacillinæ.
Wah, Wah donka, BHOT, Ailurus fulgens.
Wahabee. See Joasmi; Khalifah.
Wahab Shahi, the Kirmani wool.
Wahlea, MAHR., Basella alba.
Wai-bashika. See Digambara.
Wainganga. See Chanda.
Wai-warung, HIND., Embelia ribes.
Wakara, Wæla, SINGH., Artocarpus integrifolius.
Wakeel or Vakil, ARAB., PERS.
Wakkalu jamadalu. See Slave.
Wakkan. See Oxus.
Walbelin gas, SINGH., Ailantus Malabaricus.
Walgu-meria, SINGH., Cubebs.
Wal-jamboo, SINGH., Jambosa aquea.
Wal-kaha, SINGH., Curcuma zedoaria.
Walkera serratta, Gomphia angustifolia.
Wall, SIND., Lablab vulgare.
Wallaeel, TAM., Bangles.
Wallago attu, Boalli of Bengal.
Wallaj, JAV., Aristolochia Indica.
Wallurasi, TEL., Walsura piscidia.
Wal-papri, BOMBAY, Lablab vulgare.
Walsura, TAM., Walsura piscidia.
Wal tjedde, SINGH., Cyclea Burmanni.
Walu-luway, SINGH., Amygdalus communis.
Wal-wareka, SINGH., Casearia Zeylanica.
Wampu, Litsi of Chenab, Pyrus aucuparia.
Wang-shuee-teng. See Boats, 400.
Wanur, MAHR., Presbytis entellus.
Wan-Wang. See Literature.
Wan-yen-hiang, CHIN., Pastilles.
Wan yin silver. See Coins.
Wara guda, TEL., Cycas circinalis.
Warak, JAV., the Rhinoceros.
Warangal. See Adavi Rajas; Belala; Carpets; Pakhall.
Warangan-putih, MALAY, Arsenic.
Wara-tara, TAM., Dichrostachys cinerea.
Warawane, TR.-INDUS, Ribes.
Warbaggol, MAHR. See Pteropodidæ.
Warblers, birds of sub-fam. Calamoherpinæ, Drymoicinæ, Phylloscopinæ.
Warchechunai, TR.-INDUS, Asparagus Panjabensis.
Warealu, GUJ., Fœniculum panmori.
War-Mubarak. See Rohri.
Warragu koli, TAM., Bustard.
Warrala, SINGH., Cloves.
Warri-adu, TAM., Hemitragus hylocrius.
Warumba, HIND., Solanum xanthocarpum.
Warwyk, Admiral. See Dutch.
Wasma, Basma, PANJ., Indigofera tinctoria.
Wasps. See Chrysididæ; Insects; Vespidæ.
Wassana-pillu, TAM., Andropogon schoenanthus.
Water-cock, Gallicrex cristatus.
Water-hen, *sp.* of Gallinula.
Water-melon, Citrullus cucurbita.
Water-ouzel, Hydrobata Asiatica.
Wattal. See Kashmir.
Watta tali, MALEAL., Caturus spiciflorus.
Watte, MALEAL., Oxytenanthera Thwaitesii.
Waunta, GUJ., Freehold land.
Wax-flower, Gardenia florida.
Wazu, ARAB., Ablution, Purification.
Weasels. See Mammalia; Mustelidæ.
Weaver birds, *sp.* of Ploceus.
Weaving. See Clothing, 745.
Webera corymbosa, Ixora parviflora.
Webera cymosa, Canthium didymum.
Wedi lunu, SINGH., Saltpetre.
Wee Nee. See Literature.
Weevils. See Coffee Planting, 774; Insects.
Weewarana, Raane, SINGH., Alseodaphne semecarpifolia.
Wei, or Chung Tsang, Central Tibet, Tibet.
Wei, Wei shu, CHIN., Contetes illiger.
Wei-jui, CHIN. See Polygonaceæ.
We-kurundu, SINGH., Cinnamon.
Weld seed oil, Oil of Reseda luteola.
Weliyanna, SINGH., Anisophyllum Zeylanicum. See Ceylon.
Wel-kappitey, SINGH., Croton aromaticum.
Welle wenne, SINGH., Trigonostemon Lawianus.
Welliapanna-kalengu, HORT., MALEAL., Polypodium taxifolium.
Wellia tagera, MALEAL., Cassia glauca.
Welli ela, MALEAL., Colocasia nymphæfolia.
Weni wæla, SINGH., Cissampelos pareira.
Weppa, MALEAL., Azadirachta Indica.
Wer, HIND., Feud.
Werdil, HIND., Acacia cinerea.
Wesha, HIND., Abies Smithiana.
Western Ghats, i. 449.
Wetilla, MALEAL., Colocasia nymphæfolia.
Wet-khyæ-pa-nai, BURM., Urena lobata. See Bun-ochra.
Wet-theet-kya, BURM., Castanea tribuloides.
Wetyor, HIND., Juniperus communis.
Wfeheh, ARAB., Rennet.
Whales, *sp.* of Globiocephalus, Balænoptera. See Balænidæ; Cetacea; Megaptera.
Whang yang, CHIN., Procapra gutturosa.
Wheat ears, Saxicola, *sp.*
Whimbrel, Numenius phæopus.
Whisks. See Oxtail Standard.
Whistling teal, Dendrocygna awsurec and D. major.
White ant. See Termes.
Whiting fish, Collichthys pama.
Whitlow root, Eulophia virens.
Wi. See Karen.
Wi, HIND. of Sutlej valley, Olea Europea, O. ferruginea, O. cuspidata, Olive.
Wicker-work. See Phog.
Widows. See Hindus, 69.
Wigeon, the Marcca penelope.
Wilayat, HIND., PERS., written also Valayat, Velait, and Balait, foreign, a foreign country; Vilayati, a foreigner.
Wilayati bengan, Solanum lycopersicum.
Wilayati kantala, Agave Americana.
Wilayati kikar, Parkinsonia aculeata, also Acacia farnesiana.
Wilayati mendhi, Myrtus communis.
Wilayati nil, Prussian blue, also Indigo of Bengal, etc., prepared in European factories.
Wilayati peori, Yellow chromate of lead.
Wilayati sun of Muttra, Hibiscus cannabinus. See Ambari; Crotalaria juncea.
Wild almond tree, Terminalia catappa.
Wild apricot. See Clusiaceæ.
Wild ass of Cutch, Equus onager; Wild ass of Tibet, E. hemionus.
Wild beasts. See Husbandry, 129.
Wild dog, Cuon rutilans.
Wild goat, *sp.* of Hemitragus.
Wild sheep, Ovis cycloceros, O. nahura.
Wili, HIND. of Kanawar, Olea Europea, O. ferruginea, and O. cuspidata, Olive.
Willaiti-mung, Ground-nut, Arachis hypogea.
Will-o'-the-wisp. See Fire, 1105.
Willughbeia. See Caoutchouc.
Willum-min, TAM., Willum matchi, DUKH., Sable fish.
Wilumpi, MALEAL., Averrhoa bil imbi.
Wimzda, PUSHTU, a female slave.

Winds. See Hindustan, 77.
Winter cherry, Physalis angulata.
Witch, Dakin, Dhakun.
Wizard. See India; Ordeal; Witch.
Woadugu, TAM., Cluytia collina.
Woani, TEL., Acacia ferruginea.
Woda or Vada Chinta-kaia, TEL., Garcinia cambogia.
Wodalla, TAM., Acacia catechu.
Wodisha, TEL., Cluytia collina.
Wodrade, TAM., Alstonia scholaris.
Wœl-midi, SINGH., Vitis vinifera.
Woh-kayu-lawang, JAV., Cloves.
Woh-pala, Jav., Nutmegs.
Wokhab, HIND., Aquila fulvescens, Jinaeh.
Wokkalu. See Okkala.
Wolf, white, Canis laniger; black, C. niger; Indian, C. pallipes.
Wolfsbane, Aconitum lycoctonum.
Wolverine, Helictis Nepalensis.
Women. See Hindu, 70.
Wonga-wongu, Australian pigeon.
Woni, TEL., Acacia ferruginea.
Wontay, CAN., Garcinia cambogia.
Wood-apple tree, Feronia elephantum.
Wood-oil tree, Dipterocarpus alatus.
Wood-peckers, Birds of the family Picidæ.
Wooddulu, TEL., Phaseolus mungo.
Woodfordia floribunda, Grislea tomentosa.
Woodooga, TEL., Aleurites triloba.
Wooduga, TEL., Alangium hexapetalum.
Woolavalu, TEL., Dolichos uniflorus.
Woolunthu, TAM., Phaseolus mungo.
Wooma mara, CAN., Calophyllum inophyllum, TAM., Melia sempervirens.
Woondy, MAHR., Calysaccion longifolium.
Woorala-tel, SINGH., Clove oil.
Woosherike-pu or Wooshiri-kaia, TEL., Phyllanthus emblica, Emblica officinalis.
Woosta-kaia, TEL., Solanum pubescens.
Woothulu, TEL., Phaseolus mungo.
Worm. See Ichthyophis glutinosus.
Worm-killer, Aristoloohia bracteata.
Wormwood, Artemisia, *sp.*
Wormia Coromandeliana, Dillenia pentagyna.
Wothalay, TAM., Acacia catechu.
Wotiangil, HIND., Carpesium, *sp.*
Wotu, CAN., Loranthus falcatus.
Wowli, MAHR., Ulmus integrifolia.
Wow-wow, Hylobates agilis.
Wren, Birds of the sub-fam. Myiotherinæ, of the genera tesia, pnœpyga, troglodytes, rimator, Regulus cristatus.
Wrestlers. See Jetti; Kushtigar; Phailwan.
Wrightia piscidia, Echaltum.
Wryneck, Birds of the genus Yunx.
Wushnak, MAHR., Aconitum ferox.
Wu-chu-yu, CHIN., Xanthoxylon piperitum.
Wudalu, TEL., Phaseolus mungo.
Wuddar or Wudiawar, TEL., Labouring men, tank and well diggers, road-makers. See India; Waddar.
Wuduga, TEL., Alangium hexapetalum.
Wufat-nama, ARAB., the history of one's death.
Wugi, a great maritime people of Celebes, the Macassar men. See Bugi; India.
Wuh-mu, Wu-pi, CHIN., Ebony.
Wu-hwa-kwo, CHIN., Ficus carica.
Wukama maram, TAM., Diospyros cordifolia.
Wu-king. See Literature.
Wu-kiu-muh, CHIN., Stillingia sebifera.
Wukku, TAM., Crotalaria juncea.
Wukkun, SIND., Zapania nodiflora.
Wukna maram, TAM., Diospyros cordifolia.
Wulena, HIND., Sterculia Wallichii.
Wulhe keeray, TAM., Convolvulus repens.
Wu-lien-ta'ze, CHIN., Averrhoa carambola.
Wull-ellu, also Ellu, CAN., Sesamum orientale.
Wulli kirai or Vulli kirai, TAM., Convolvulus repens.
Wul-wala, TEL., Dolichos uniflorus.
Wuma mara, CAN., Calophyllum inophyllum.
Wumb, MAHR., Nephelium longanum.
Wu-mu, Wu-pi, CHIN., Diospyros melanoxylon.
Wunde, CAN., Female tree of Calysaccion longifolia.
Wungu or Ketangi, a wood of Java, often used instead of teak; the grain is somewhat finer; when in full blossom, it is perhaps the most beautiful tree existing. Wuni, of Java, affords a reddish wood.
Wunjah maram, TAM., Acacia amara.
Wunjooli maram, TAM., Cedrela toona.
Wurak, HIND., PUSHTU, Rhamnus virgatus, R. Persica?
Wurali. See Curare.
Wuria, HIND., Corylus colurna.
Wuroon Dev. See Spirit-worship.
Wurrialc, GUJ., HIND., Fennel seed, Nigella sativa.
Wurrus, MAHR., Bignonia quadrilocularis.
Wusaweh. See India.
Wusiat nameh, ARAB., a will or testament.
Wu-sih-fu, CHIN., Bole Armenian.
Wusiqa, a bond or written agreement.
Wustay-kaia, TEL., Solanum pubescens.
Wu-tsih-yu, CHIN., Cuttle-fish.
Wu-tung-shu, CHIN., Dryandra cordifolia.
Wu-yu-wha, CHIN., Jonesia asoka.
Wyala, TEL., Vitex negundo.

X

XANJURA, HIND., Commelyna obliqua.
Xanthoxylum hostile. See Tejbal.
Xanthoxylum piperitum. See Fagara; Japan; Pepper.
Xatifah, MALAY, Carpets.
Xenopeltidæ. See Reptiles.
Xerxes. See Languages; Persepolis.
Ximenia Ægyptiaca, Balanites Ægyptiaca.
Xiphidium. See Hæmodoraceæ.
Xiphiidæ. See Fishes, 1118.
Xiphiline. See Polyandry.
Xisuthrus. See Chaldæa, 641.
Xylia dolabriformis, Inga xylocarpa.
Xylocarpus granatum, Carapa Moluccensis.
Xylophagi. See Insecta.
Xylopia aromatica. See Pepper.
Xyloscopa tenuiscapa. See Carpenter Bee.
Xylotrechus quadripes. See Borer; Coffee Planting, 775.

Y

YACONIN, JAP., a person in Government employ.
Yadava. See Krishna.
Yadu or Jadu. See Rajputs.
Yæ-kha-oung, BURM., Ficus dæmonum.
Yæ-kyie, BURM., Strychnos potatorum.
Yæ-tha-pan, BURM., Ficus glomerata.
Yah-chih-ts'au, CHIN., Commelyna polygama.
Ya-hiang, Mih-hiang, CHIN., Lignaloes.
Yailak. See Kishlak.
Yai-nan, BURM., Petroleum.
Yajna-walkya. See Janaka.
Yajnopavita, SANSK., Zonar.
Ya-kiu, CHIN., Stillingia sebifera.
Ya-lan-mi, CHIN., Cochineal.
Yali. See Sculptures.
Yalum, MALEAL., Elettaria cardamomum.
Yam, *sp.* of Dioscorea.
Yama-dipa, Lamp of Yama. See Cartica.
Yanadi. See Cuddapah.
Yang of Kashmir, Ferula asafœtida.
Yang-k'-i-shih, CHIN., Asbestos.
Yang-t'sai, CHIN., Sea-weed.
Yang-t'-sing, CHIN., Cobalt.
Yang-tze-kiang, i. 438.
Yan-siu-kiu, CHIN., Hydrangea Thunbergii.
Yashm, PERS. See Jade; Yuh.
Yashti madhukamu, TEL., Liquorice.
Yasna. See Zendavesta.
Yavanika, SANSK., Ligusticum ajowan.
Yaverne, SINGH., Alseodaphne semecarpifolia.
Yayla, Yalak, or Ailak, TURK., an upland.
Yazna or Yajna. See Parsee.
Yegi, TEL., Pterocarpus marsupium.
Yela kulu, Sanna elaki, Elettaria cardamomum.
Ye-lan-hiang, CHIN., Pergularia odoratissima.
Yelderm. See Othman.
Yelka'of Waddars, Gerhillus Indicus.
Yella maddi, TEL., Anogeissus latifolius.
Ye Malai, Mount Dilli.
Yemaneh, BURM., Gmelina arborea.
Yen-chi-kiah, CHIN., Lawsonia inermis.
Yendaik, BURM., Diospyros embryopteris, Dalbergia latifolia.
Yen-hu-soh, CHIN., Corydalis ambigua.
Yenki, Limboo, Boehmeria frutescens.
Yen-lai-hung, CHIN., Plumbago Zeylanica.
Yentawa, TEL., Herpestes, *sp.*
Yenuga-palleru, TEL., Pedalium murex.
Yen-wo, CHIN., Bird nests.
Yerika, Erika, MALEAL., Calotropis gigantea.
Yerkala. See Couvade; Cuddapah.
Yervol, CAN., MAHR., Inga xylocarpa.
Yerra adavi malla, TEL., Jasminum.
Yerra gogu, TEL., Hibiscus sabdariffa.

Yerra-juvi, TEL., Ochna squarrosa.
Yetti-cottay, TAM., Strychnos nux vomica.
Yew, Taxus baccata.
Yezdejird. See Persia.
Yezid. See Khalifah.
Ygarrot. See Philippines.
Yih-mu-ts'au, CHIN., Leonurus Sinensis.
Yin-chin-hau, CHIN., Wormwood.
Ying-chun-hwa, CHIN., Magnolia conspicua.
Ying-shwui-shih, CHIN., Calc. spar.
Yoga. See Sankhya.
Yoh-hung-hwa, CHIN., Safflower.
Yomah. See Mountains.
Yomut. See Turkoman.
Yoong, BURM., Conocarpus acuminatus.
Young-tha-ji, BURM., Xanthoxylon budrunga.
Ypo, CELEBES, Strychnos tieute.
Yuchi or Yue tchi. See Hun; Indo-Scythi; Sacæ.
Yudishtra. See Baldeva; Indraprastha; Pandu.
Yueh-shih, Hwan-sha, CHIN., Borax.
Yueh-tan, CHIN., Gardenia radicans.
Yuen-tan, Tan-fen, CHIN., Minium.
Yuh, CHIN., Jade.
Yu-kiau, Yu-piau-kiau, Isinglass.
Yu-li, CHIN., Cherry, Cerasus vulgaris.
Yul-Sung, or Lhassa. See Tibet.
Yung ma dæ, BURM., Abelmoschus esculentus.
Yung-mai, Yang-ma, CHIN., Eriobotrya Japonica.
Yun-hiang, CHIN., Sandarach.
Yu-tu, CHIN., Colocasia esculenta.
Yu-yu-liang, CHIN., Hæmatite.
Yuz, HIND., Hunting leopard, Felis jubata.
Y-wai-gyi, BURM., Adenanthera pavonina.
Ywet kya pen pouk, BURM., Bryophyllum calycinum.

Z

ZABABI, HIND., a kind of emerald.
Zabad, ARAB., Civet.
Zabib, ARAB., Vitis vinifera, Raisins.
Zabit, ARAB., PERS., a chief magistrate of a town; in Egypt, the police magistrate.
Zabiyah-ul-Mohil. See Maldive Islands.
Zabiostan. See Kandahar.
Zabrjad or Zamarrad, HIND., Emerald.
Zabub. See Fly; Insects; Zimb.
Zadianuj, ARAB., Fennel, Nigella sativa.
Zadwar, ARAB., Curcuma zedoaria.
Zae. See Zai; Zoe.
Zaemukt. See Afghanistan.
Zafaran, HIND., Crocus sativus, also Aristolochia rotunda.
Zafar-takeea, a fakir's dwelling.
Zafnee, PERS., the laurel.
Zaghun, HIND., Cucumis melo.
Zagros. See Ecbatana.
Zahal, ARAB., Saturn.
Zahar, PERS., Poison.
Zahari gugal, KASH., Cicuta virosa.
Zahar mohra, HIND., Bezoar.
Zahr-ul-ajl, ARAB., Mirabilis jalapa.
Zai, PUSHTU, a section of a tribe, oftener written Zye, as Eusufzye, Barakzye. See Zoe.
Zain Shah, a Muhammadan saint; oblations are offered at his shrine.
Zain-ul-abidin, ARAB., a Muhammadan. See Sufi.
Zaisi, HIND., Glycirrhiza triphylla.
Zaitun, HIND., Olea Europæa, the olive tree, also Olea ferruginea.
Zaj-balur, PERS., Alum.
Zaj-i-sham, Syrian vitriol.
Zakat, ARAB., Alms, Tithes, Customs, Duties levied on commodities of importance.
Zakha Khel. See Afghanistan.
Zakhm-i-haiyat, PERS., Sphæranthus mollis, also S. hirtus, Glinus lotoides, Cissampelos pareira, Tinospora cordifolia, and the creeper Lettsomia.
Zal. See Teheran.
Zaleya decandra, Trianthema decandrum.
Zalzalah, PERS., an earthquake.
Zamai, HIND., Suæda fruticosa.
Zamarrud, ARAB., Emerald, Beryl.
Zamba, HIND., Prunus padus.
Zambak, ARAB., Polyanthes tuberosa; PERS., Jasminum sambac.
Zamboorak, small pieces of artillery, wall-pieces or swivels mounted on camels.
Zambur, HIND., large powerful pincers, Forceps.
Zam-gyouk, BURM., Garuga, *sp.*
Zamin, PERS., Earth; Zamin-bosi, a humble salutation, literally kissing the earth.
Zamin-kand, HIND., Arum campanulatum, also Dioscorea bulbifera, Yam.
Zammalu, SINGH., Pterocarpus marsupium.
Zamorin. See Feudatory; Fishermen.
Zampun, a Chinese district officer in the valley of the Sutlej in Hundes.
Zam-zam, Hagar's well at Mecca.
Zand, also Zend. See Persia.
Zanda, HIND., Dracocephalum heterophyllum.
Zandian, TEL., the zonar or zannar, sacred cord of the Hindus.
Zangar or Zangabar, Verdigris, Subacetate of copper; when pounded it yields a blue-green of great beauty. Zangari-kacha-rang, Verditer, a green colour, not permanent; it is made by dipping cloth into a solution of verdigris. Zangari-pukhta-rang, Verditer, permanent blue. Zangari rang, a pale blue-green colour; applied also to emeralds of good colour, a verditer blue or turquoise colour.
Zangaria. See Central Asia, 619.
Zangbar, ARAB., Sulphate of copper, Blue-stone, Blue vitriol.
Zangbari, PERS., Pistacia terebinthus, Turpentine.
Zangcha, HIND. of Basahir, Bricktea.
Zanjabil, PERS., Ginger.
Zanjafar, ARAB., Cinnabar.
Zanjira, also written Yanjira and Jinjeera, a Mahrattá corruption of Jazira, an island.
Zanjira, PERS., a chain, a kind of gold wire.
Zantedeschia aromatica, Homalonema aromaticum.
Zar, HIND., Gold; Zarin, Golden.
Zara baf, Cloth of gold or gold tissue.
Zar-afshan. See Central Asia; Chryse.
Zar afshane kaghaz, Gold paper.
Zaral, HIND., Gymnosporia spinosa.
Zarangi. See Daria.
Zarawand-kalan, HIND., or Z. daraz or Z. tawil, Aristolochia longa.
Zarawand mundaraj or Z. khurd, Aristolochia rotunda.
Zarayat, PERS., Agriculture, Husbandry.
Zar buti, HIND., Cuscuta reflexa.
Zard, PERS., Yellow.
Zarda, HIND., a quality of tobacco.
Zardak Lahori, PERS., Batatas edulis.
Zard-alu, PERS., Prunus Armeniaca, Apricot, the Armeniaca vulgaris; properly Zard-aru, the yellow peach, corrupted in the hills of the N.W. Himalaya into jaldaru, jaldhari, and hari.
Zard chob, Zard chobeh, PERS., Turmeric, Curcuma longa.
Zard gopi, HIND., Butea frondosa.
Zard matti, HIND., Yellow ochre.
Zar-dozi, HIND., Embroidered with gold thread, Gold embroidery.
Zard sosan, HIND., Amarantus aurea.
Zareeh, a tombstone, in the shape of a taboot.
Zarf, ARAB., a cup without handles; plural, Zaruf, Vessels.
Zargal, HIND., Flacourtia sepiaria.
Zargar, a goldsmith.
Zari, HIND., Zizyphus nummularia.
Zari, Cloth of gold. See Bodla.
Zaria, PERS., Chain armour.
Zarira, also Kasbul zarira, HIND., Agathotes, *sp.*
Zarishk talkh, HIND., Berberis lycium, B. Asiatica or B. aristata.
Zarmanochegus. See Pandya.
Zarnaik surkh, ARAB., Red sulphuret of arsenic.
Zarnaik-zard, PERS., Yellow sulphuret of arsenic, Orpiment.
Zarnub, also Zurnui, HIND., Taxus baccata, Himalayan yew.
Zarrah Lake, the Aria Palus; Zur is a mountain in Dawar, and a celebrated idol which was there worshipped. According to Elphinstone, it is in the middle of the Lake Zaranj or Zarrah, which the natives call the Sea of Zur. Conolly, however, says it is not in the lake, but in the vicinity of it.
Zarrat or darra, ARAB., Sorghum vulgare.
Zatar-kalandar, HIND., Thymus serphyllum.
Za te phu, BURM., Nutmeg, Myristica moschata.
Zatt, a gipsy tribe in Oman.
Zatud, HIND. of Ladakh, Urtica hyperborea.
Zaza, a Kurd race between Diarbeker, Palo, and Moosh.
Zbam or Mat zbang, HIND., Abelia triflora, also Lonicera quinquilocularis.
Zbur, HIND., Artemisia sacrorum.
Ze-being, a tribe in Burma.
Zebra. See Equidæ; Kyang; Mammalia.
Zedoary, Curcuma zedoaria.
Zekum, ARAB., Euphorbium.
Zelu, PERS., Leeches.
Zen-bywon, BURM., Dillenia scabrella.
Zend. See Literature; Pa-zend.
Zendavesta. See Huzurash; Parsee.
Zengi-har, BENG., Myrobalan.
Zenobia, widow of Odenatus. See Tadmor; Palmyra.

Zeocritum distichon, Hordeum distichon.
Zeolites, Minerals composed of silica, alumina, some alkali, and some water; they are abundant near Naldroog.
Zerambad, Zerakbad, also Jadwar, PERS., Curcuma zedoaria.
Zerawand-daraz, Zerawand-ut-tawil, PERS., Aristolochia longa.
Zertusht. See Zoroaster.
Zerumbet speciosum, Alpinia nutans.
Zeuzera coffeæ. See Coffee Planting; Dropana.
Zewar or Kali zewar, HIND., Bupleurum marginatum.
Zeylah, in lat. 11° 22′ N., long. 43° 30′ E., a seaport town of some importance on the east coast of Africa, trading with Mocha.
Zezi, HIND. of Spiti, a kind of barley.
Zhamo, BHOT, Sciurus lokriah.
Zhangar, HIND., Dolomiæa macrocephala.
Zhikak, HIND., Daphne oleoides.
Zhiko, HIND., Lonicera hypoleuca.
Zhing, TIB., Cultivated land.
Zho, TIB., the domestic animals in Ladakh are principally ponies, the yak, the zho, asses, mules, sheep, goats, and dogs. The zho or zhobu is a hybrid between the yak and the common cow; the female is called a zho-mo.
Zhuk, HIND., Spiræa Kamtschatika.
Ziarat, a valley in Baluchistan of considerable extent, well watered and cultivated.
Zib, ARAB., Iguana.
Zibakh, ARAB., Mercury.
Ziganah, 12 leagues from Trebizond on the road to Erzerum, gives name to the Ziganah Dagh pass.
Zigger, a Baluch tribe. See Baluchistan; Minghal.
Zik, BHOT, Felis diardi.
Zilzarch, HIND., PERS., Rasaut, the extract of berberry root.
Zimb of Abyssinia, one of the Tabanidæ. See Fly; Insects; Tse-tse.
Zimbil, HIND., Potamogeton gramineus.
Zimbjoon, Dillenia aurea.
Zimiong, BHOT, Mustela subhemachalana.
Zimma, BURM., Chickrassia tabularis.
Zimmay. See Karen; Laos; Maha-Radza-Weng; Titles.
Zimpe. See Bhutan.
Zin, PERS., HIND., a saddle, pronounced Zeen; Zin-posh, an embroidered saddle-cover.
Zinbaori, JAP., a war surcoat with gold tissue facing.
Zinbyown, BURM. ? Dillenia, *sp.*
Zinda Shah Madar. See Dam-i-Madar.
Zindik, ARAB., a fire-worshipper.
Zin-ga-lae, TAVOY, Ancistrolobus carneus.
Zingi. See Orfa.
Zinjabil, Zingabil, ARAB., Zingiber officinale.
Zinzid, PERS., Elæagnus orientalis.
Ziogun, a title of former secular emperors of Japan.
Zira, HIND., Bupleurum marginatum, also Cuminum cyminum.
Ziraat, HIND., Agriculture, Cultivation, Tillage, Husbandry.
Zirah gulab, HIND., Rosa centifolia.
Zirai rang, HIND., Shade of the brown drab colour of zira or cumin seed; in Pushtu, yellow colour.
Zirak, the ancestor of the Barukzai clan of Afghans. See Daurani.
Zira safed, Cuminum cyminum, Cumin seed.
Zira siyah, HIND., Carum gracile, also Cuminum cyminum, black cumin; sometimes applied to caraway seed, also to Aplotaxis candicans.
Zircon. See Precious Stones.
Zirduk, PERS., Carrot, Daucus carota.
Zireer, PERS., Melilotus officinalis.
Zirishk shirin or Mitha zirishk, a raisin derived from the Vitis vinifera.
Zirishk talkh or Zirisht-tursh, a very austere berry which resembles the fruit of the Berberis lycium.
Zirra, also Zirra baktar, PERS., Plate armour.
Zirsud, ARAB., Curcuma longa.
Zitha, BURM., Castanea Martabanica.
Zizania aquatica. See Pasari.
Zizyphus hamosa, Sageretia hamosa.
Zjibb-ul-ajl, EGYPT., Mirabilis jalapa.
Zodiacal signs, Joshi.
Zoe, PUSHTU, means son, generally spelled Zae, Zye, Zie, or Zai.
Zoœæ. See Crustacea.
Zoenil, HIND., Pyrothrum, *sp.*
Zogi. Dras adjoins Kashmir, the intercommunication being by the Zogi pass, a remarkable depression of 11,300 feet, through which blow the moist winds of Kashmir, and Dras is the most humid and fertile province of Tibet.
Zohak. See Gaveh.
Zohur, ARAB., HIND., PERS., Noon; Zohar-ka-namaz, the noontide prayers.
Zoilus. See Bactria; Greeks.
Zolim-buriki, TAM., Schleichera trijuga.
Zollinger, a Dutch naturalist who resided a long time in the island of Bali.
Zonangi. See Jonakan.
Zonnalu, TEL., plur., Sorghum vulgare.
Zonuridæ, a family of Saurian reptiles. Tachydromus sexlineatus, the Tachydrome, is a tropical form of this family, and is found in Cochin-China, China, Borneo, and Java; Pacseudopus gracilis is of Khassya. See Reptiles.
Zoottupaku, TEL., Cynanchum extensum.
Zoroastrians. See Ormuzd; Parsee.
Zosho, HIND., Daphne oleoides.
Zoung-ga-la, BURM., Ancistrolobus carneus.
Zoung yah, BURM., Averrhoa carambola.
Zoz, Zozan, HIND., Alhagi maurorum.
Zozymus, LEACH., a genus of brachyurous crustacea.
Zraud, HIND., Cuscuta pedicellata.
Zruf, ARAB., Zizyphus jujuba.
Zuburjud, PERS., Topaz.
Zuddal tayngai, TAM., Sea-cocoanut.
Zufa, HIND., Nepeta ciliaris.
Zufæ yabis, ARAB., Hyssopus officinalis, also written Zufai yeabus and Zufai yebus.
Zulikha, Potiphar's wife.
Zull, ARAB., Carpets.
Zunkar mad'ni, also Tutiai sabz, PERS., Sulphate of copper.
Zuruk or Zoruck, a heavy traffic boat on rivers Sutlej, Indus, etc.
Zury, TURK., a thorny shrub of Balkh on which camels graze.
Zutup-aku, TEL., Cynanchum extensum.
Zu un Nun. See Sufi.
Zu-ya, Dze-ya, BURM., Cumin seed.
Zygodactylæ. See Phosphorescence.

DETAILED INDICES OF ARTICLES 'BIRDS,' 'BOATS,' AND 'BRITISH INDIA.'

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